

VOL. 28 NO. 13

A Focus on
public sector

Yojana

JULY 16—31, 1984 □ RUPEES 1 50

The spatial planning
NEXT ISSUE
August 15 Special

Indigenous technology for fertilizer production

INDIA HAS ACHIEVED considerable progress in the acquisition and development of indigenous know-how in the field of chemical and fertilizer industries.

The public sector consultancy organisations, namely, Projects and Development (India) Ltd. (PDIL), F&CT Engineering and Development Organisation (FEDO), and Engineers India Ltd. (EIL) have acquired capabilities for preparation of detailed feasibility studies, detailed engineering, procurement, including inspection and follow-up erection and commissioning of plants.

PDIL has been selected as the prime contractor for the 600 tonnes per day ammonia plant at Namrup in Assam. The company is also associated with the construction of ammonia plants of the Thal Fertilizer Project and urea plants at Thal and Hazira. A number of catalysts required for the manufacture of fertilizers are also now produced by PDIL on the basis of their own technology.

FEDO is associated with the construction of ammonia plants of Hazira Fertilizer project. Over the years, the country has developed wide and diversified industrial base geared especially to meet the specialised requirements of the fertilizer industry such as high pressure vessels, compressors, pumps and heat exchangers. []

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Focus on public sector

PUBLIC SECTOR today occupies the central place in the economic and social development of the country. It almost covers all the vital areas of the economy.

The number of public sector enterprises (PSEs) run by the Central Government has risen to 223 in 1983 from a mere five in 1951, when the planned development started. The investment in them has increased to Rs. 30,039 crores from Rs. 29 crores during the last 32 years.

Besides these undertakings, we have several public enterprises under the state governments and also public utility services like railways, communication, Posts and Telegraphs with huge investments.

After having attained a record profit in 1982-83, the public sector has somewhat slipped in 1983-84. A lot of public interest has generated in the last few years in the matter of their functioning. People are keen to know as to why sufficient returns are not forthcoming in spite of massive investments made in this vital sector. What are the problems the PSEs are facing? What are the constraints under which they are functioning? Have they achieved the objectives which were set for them? How could their functioning be improved? What, after all, is wrong with them? These are some of the questions which arise when the subject of public sector functioning comes up for discussion.

It is in this context that the deliberations of a two-day conference of chief executives of public sector undertakings held recently in New Delhi will be of interest to our readers.

In his opening address, the Union Minister of Finance, Mr. Pranab Mukherjee, asked the public sector to generate sufficient return. "Economic viability must be the principal test for the survival of an enterprise", he said.

Timely action

A clear appreciation should emerge of the need for performance upgradation, whether in the area of project management or production management. It should be possible to overcome the external factors like inadequate availability of power, transport bottlenecks etc. by initiating timely action in the organisation.

Emphasising the need to create surplus generation of resources for further growth and development, he said, reliance on price mechanism for this purpose without adequate attention to control and monitoring for optimum utilisation of investment would be counter-productive beyond a point.

Pointing out to the phenomenon of time over-run leading to cost over-run, Mr. Mukherjee said the whole viability of a project got eroded due to time delay and cost escalation. "A consciousness should permeate all round to see that the projects are implemented according to schedule."

Inventory control

He wanted the public sector undertakings to cut short the cycle time for turn around of capital. Inventory control is a must, otherwise "capital gets locked up, interest burden gets added and inventories carrying cost mounts", he said.

Referring to the industrial relations, he said, the main duty of the management as well as labour was to strive towards realising their organisational goals. "Sharing the gains is a well accepted international practice. One can understand the system of collective bargaining, but what one witnesses in public enterprises is not collective bargaining but competitive bargaining. There is a constant quest to get more and more based on external considerations. Pay increases every four years or so without increase in production and productivity cannot go on. From 1970-71 to 1981-82, the per capita emoluments of Public Sector employees had risen by 196 per cent while the consumer price index had gone up only by 140 per cent. In some enterprises, the value added per man month is less than the average monthly emoluments per employee. This is not a healthy sign." One of the major causes for industrial unrest is the demand for wages and perks without due appreciation of the nature of industry, environmental conditions, such as capacity to pay by the organisation concerned, etc. Any demand for wage or salary increase has to be backed by proposals for improvement in production, productivity and profitability. A clear linkage needs to be established," he added.

In his address to the chief executives, the Minister of Planning, Mr. S. B. Chavan, said that the country was at the threshold of a take-off stage where productivity meant prosperity. An immediate pay off from higher productivity was better utilisation of existing capacities. It took greater ingenuity and perseverance to get more out of existing capacities at the margin than increasing production by creating new capacities. A sustained productivity drive for two to three years would result in magnitude of savings which would be more than half of the central budget.

Mr. Chavan wanted that a lot of attention should be given to project management. A project properly conceived, formulated and executed, was an insurance for healthy growth, he said.

Pointing to the need for inventory management, he said, the cost of carrying inventories was more than 20 per cent of the value inventories. If the total inventory, which amounted to Rs. 10,000 crores in 1982-83, could be reduced by 10 per cent, it would result in the release of Rs. 1000 crores for additional investment.

Need for corporate plan

Mr. Mohammed Fazal, Member, Planning Commission, said that an industrial or commercial undertaking, must retain its commercial character and fulfil the basic commercial obligations. The top management must possess and develop the capacity to take decisions even under conditions of uncertainty. But the objectives of the concern should be clearly spelt out as the most efficient manager might not be able to deliver the goods, if the objectives of the company were not clearly defined. At present, he said, the objectives of individual public enterprises were too general and overlapping to provide guidelines for specific undertakings with varied character and environment.

At the level of the individual company, effectiveness standards could be set only within the framework of a corporate plan, through which an undertaking could go to serve the twin requirements of external accountability and internal control. In addition, the corporate plan provided a plan of action and a framework in which the performance of the undertaking could be judged.

He wanted the management to reduce considerably the unit cost of production of manufactures, goods and services. The capital cost of Indian projects were always pitched much higher than that of a similar project in a developed country. With the judicious use of technology and careful examination of various components of capital equipment, the cost of capital investment in hardware of a project could be suitably reduced, he said.

He expressed his concern as to why cost overruns of projects were between two times to approximately six times of the original cost, and time overruns were 40 months to 150 months of various types of projects in the country. He said there was a need to revolutionize the building and plant assembling industries to ensure quick project implementation.

Mr. Fazal said the principle of accountability of the chief executive in a public enterprise to the government and Parliament would need proper definition. Management should be held responsible only for the total performance of the company and not for individual day-to-day decisions of the management. Too much concerns about the details of operations of a company and various decisions made at different levels could be counter productive. This could result in diluting even the sense of overall responsibility of the companies.

Accountability could not be effective unless the companies had considerable delegation of powers and they in turn sub-delegate authority at different levels of management. It would be necessary to define and demarcate clearly the role, duties, and responsibilities of the Minister in-charge Secretary of the Ministry concerned, and the Chief Executive of a public sector company.

He also wanted to give attention to the question of managerial compensation. The salaries of managerial personnel in public sector were low. Taking into account the considerable responsibilities they were carrying, and also the prevailing salaries for comparable positions in the private sector, it would be absolutely essential to fix managerial salaries in public sector on more realistic and practical basis.

Motivated propaganda

Mr. Mohammed Fazal said that due to deep rooted bias and motivated propaganda, public sector had been used as a convenient 'whipping boy'. There had been from time to time in different fora an undeserved damnation of the entire public sector. Such an attitude had to change, he added.

In his address, Mr. S. Samarapungavan, Chairman, Steel Authority of India, pointed out that the traditional methods of financial appraisals of public sector undertakings would not be fair if such an assessment was limited to profitability aspect alone, ignoring the contributions made by them in discharging their socio-economic objectives.

Aspects like development of backward areas, providing public utility services at subsidised rates, selling basic inputs or products at administered prices, providing medical, educational and housing facilities to employees etc. also needed to be taken into account. However, the public enterprises collectively had uniformly shown gross profit to capital employed at rates varying from 6.33 per cent to 13.05 per cent over the last 10 years.

He also pointed out that almost always, the public sector industries had to operate within the control and administered output price when selling was easy. Since volume of output in key and core sectors could not be raised quickly, the generation of surplus was not high in public sector industries even when demand was adequate.

(We carry here some of the key note addresses made at the conference, which provide a comprehensive focus on the public sector).

—Editor

A critical appraisal

Pranab Mukherjee

Emphasising the need to create surplus generation of resources for further growth and development, the author cautions the public sector not to rely on price mechanism for this purpose as it would be counter productive beyond a point. Moreover, economic viability must be the principal test for the survival of an enterprise, he adds.

MASSIVE INVESTMENTS have been made and continue in the public sector, which is truly a People's Sector. Sufficient returns must come out of the investments made. The public sector after having attained a record profit in 1982-83 has somewhat slipped back in 1983-84. There are also 'lame ducks.'

I had stated in my budget speech this year that the time has come to undertake a careful review of the performance of sick units in the public sector with a view to reducing the drain on our resources. I also emphasised that economic viability must be the principal test for the survival of an enterprise.

Organisational excellence

Organisational excellence is the result of harmonious management and labour effort. It is a collective endeavour in which both the management and workers have their respective roles to play, to improve the performance of the public owned enterprises. The concern of both should be how best the national resources could be optimally utilised, to get the best result in terms of output, quality and cost. Through effective in-house efforts, performance upgradation to a significant level is certain, provided there is a spirit of loyalty and participative management in the organisations.

Efficient utilisation of plant and equipment, energy use, material utilisation, improvement in management

practices, systems and procedures, work methods, evolving appropriate marketing strategy, are all actions which fall within the domain of in-house efforts. Even certain external factors like inadequate availability of power, transport bottleneck, etc., which adversely affect the operations can be overcome by initiating timely action in the organisation. In other words, organisational excellence can be predicted when there is greater awareness of actions to be initiated within the organisation.

Surplus generation

Assessment of excellence often tends to become subjective in the context of multiple objectives placed before the public enterprise. It is recognised that an omnibus set of criteria cannot be applied indiscriminately for purposes of evaluation. More often the focus on performance is diffused. Lack of performance and non-performance get attributed to the diverse objectives—whether it is regional development upliftment of backward classes, provision of goods at subsidised rates and so on. The emphasis on profit earning therefrom gets lost. One has to draw a line somewhere. Surplus generation is essential for further growth and development. The growth and development of an enterprise which is unable to generate sufficient resources would be jeopardised. Reliance on price mechanism for this purpose without adequate attention to control and monitoring mechanisms for optimum utilisation of resources, including cash, would be counter productive, beyond a point.

One has to recognise that we are operating a system of mixed economy in which both public and private sector enterprises operate on a competitive basis in a number of sectors. I agree that extraneous factors which affect the performance levels need to be given necessary weightage in the matter of evaluation. For instance, if an enterprise has been set up as a conscious decision of the Government in a backward region, naturally one cannot expect that particular enterprise to operate with commercial profit. The concept of social profitability no doubt would be applicable in such cases, and proper weightage for the



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1. Supply of both indigenous and imported machines on easy hire purchase terms. Special concessional terms have been introduced for units in backward areas and also for units promoted by entrepreneurs from weaker sections of the society.
2. Marketing of small industries products, based on consortia approach.
3. Export of small industries products and developing export worthiness of small scale units.
4. Enlisting competent units and facilitating their participation in Government Stores Purchase Programmes.
5. Developing prototypes of machines, equipment and tools which are then passed on for commercial production.
6. Training in several industrial trades.
7. Development and upgradation of technology for projects based on wastes.
8. Supply and distribution of indigenous and imported raw materials.

During the last 28 years, NSIC has made significant contribution to the growth of small scale sector in India. It has helped in building up entrepreneurs in all parts of the country. It continues to do so and has ambitious programmes for growth of its activities. It now operates through Branch Offices at State level and has developed linkages with other concerned institutions.

NSIC is now setting up small scale industries on turn-key basis.

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social objective which gets fulfilled could be given. An evaluation of the performance following from objective criteria should establish good and bad performance levels. The most important consideration is a clear appreciation of the need for performance upgradation.

Avoiding cost escalation]

One witnesses very often the phenomenon of time over-run in the PSEs leading to cost over-run. The whole viability of a project gets eroded due to time delay and cost escalation. All the projections go away. This situation cannot be allowed to continue in the midst of our scarce resource and balance of payment position. A consciousness should permeate all round to see that the projects are implemented according to schedule. In our observation, the problem of delays could be tackled successfully at the site, if the management is alert to the need for completion of the project on time. Any procedural improvement to expedite the completion of the project can certainly be considered by the Government.

Profitability of an enterprise substantially depends on how efficiently the whole gamut of activities—purchases and timely use of materials and turn-out of finished goods takes place. In other words, the cycle time for turn around of capital should be as short as possible.

In a number of enterprises we come across instances where inventories which would meet the requirement for a number of years are stored. This completely erodes the economy of the enterprises. Capital gets locked up, interest burden gets added and inventory carrying cost mounts. All these flow from unused inventories.

Industrial relations

Proper industrial relations climate is essential for a successful running of any organisation. A motivated work force could help in achieving the objectives set for the organisation. The main duty of public sector management as well as labour is to strive towards realising their organisational goals.

Sharing the gains is a well accepted international practice. One can understand the system of collective bargaining, but what one witnesses in public enterprises is not collective bargaining but competitive bargaining. There is a constant quest to get more and more based on external considerations. Pay increases every 4 year or so without increase in production and productivity cannot go on. From 1970-71 to 1981-82, the per capita emoluments of Public Sector employees had risen by 196 per cent while the consumer price index had gone up only by 140 per cent. In some enterprises, the value added per man per month is less than the average monthly emoluments per employee. This is not a healthy sign.

One of the major causes for industrial unrest is the demand for wages and perks without due appreciation of the nature of industry, environmental conditions, such as capacity to pay by the organisation concerned,

etc. Any demand for wage ~~increase~~ has to be backed by proposals for improvement in production, productivity and profitability. A clear linkage needs to be established. Sharing the gains would naturally flow from surplus generation:

I do also believe that industrial relations climate would improve by participative management. On the eve of new year, Government had announced a new scheme of workers' participation in management. The new scheme has to be practised with vigour in the Public Enterprises. The commitment to the philosophy of participative management has to come from both management and labour. More training programmes with case studies could be organised to demonstrate the benefits of participation where these have proved successful.

Performance upgradation

Basic to the philosophy of participation is the principle that the resources in terms of men, materials and machines need to be utilised in a coordinated manner to achieve desirable production of quality goods. There is under utilisation of the resources in some of the industries—fertilizers, non-ferrous metals, steels, etc. There is direct correlation between capacity utilisation and profitability. With performance upgradation, the public enterprises could enhance their contribution to the resource generation for economic development.

In the last Conference of Chief Executives of Public Enterprises, the Prime Minister emphasised that studies should be undertaken relating to the enterprises characterised by under utilisation of capacities in order to identify the problems and take remedial action. I trust the efforts under-way would help in improvement in capacity utilisation during 1984-85.

Goal setting is essential to strive for performance improvement. Can we say that at least 5 per cent more capacity utilisation during 1984-85 over the level of 1983-84 would be achieved by the enterprises which operate at less than 75 per cent of their installed capacities? This is a modest aim. Similarly, quantifiable targets in areas of inventory control, cost reduction, and organisational improvements should flow as recommendations of this Conference.

I would like to end with what our Prime Minister had said at the last Conference—"Public Sector is not just industry, but it is an article of our public faith." She had cautioned that "of all slopes, complacency is the most slippery." These words need to be constantly kept in view. A duty is cast on all of you as captains of industries to ensure that the faith is kept alive. I trust that with renewed vigour and sustained efforts, the public enterprises as a group and as individual units would give a better account in the year ahead. □

Managing National Food Security

From its small beginnings in the four southern States in 1965, the Food Corporation of India has grown to cover the entire country. Providing security to both farmers and consumers.

By carrying the food buffer FCI averts the possibility of a crisis. An indispensable function that has helped the country face severe drought in two consecutive years and many floods.

The farmer is assured of a remunerative price for his grains. FCI buys their grains through its vast network of purchase centres in the country. It purchases to the extent of 98.7% of market arrivals of wheat and 77.9% of rice production in Punjab alone. Thus ensuring price and market security to the farmer for his produce and sustaining continuous growth in food production.

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In 1983, FCI reached the highest ever level of indigenous procurement and distribution of foodgrains.

For over 19 years FCI has been successful in fulfilling the national food policy objectives. Giving the farmer a fair price for his grains and the consumer, his grains at a fair price. A good reason to celebrate today its 19th anniversary.

PERFORMANCE HIGHLIGHTS

	1982-83	1983-84 (estimated)	(+) % increase
Buffer Stocks (lakh tonnes)	43.7	71.3	63.3
Operational Stocks (lakh tonnes)	46.4	51.0	9.9
Total Purchases (lakh tonnes)	182.6	198.1	8.5
Total Sales (lakh tonnes)	159.1	180.1	13.7
Total Purchases & Sales (lakh tonnes)	341.7	378.2	10.7
Total Turnover (Rs. Crores)	6935.0	8133.0	17.3
Total Storage Capacity (lakh tonnes)	181.4	195.2	7.6
Capacity Utilisation of Storage Space (Peak)	73.5%	85%	15.6%
Staff Cost as % of Turnover	1.6	1.5	(-)4.5

Getting a fair price for foodgrains
Getting foodgrains at a fair price

FOOD CORPORATION OF INDIA

19 years in the service of the nation

Don't make it a 'whipping boy'

Mohammed Fazal

Calling for inculcation of commercial character in the public sector, the author says, the top management must possess and develop the capacity to take decisions even under conditions of uncertainty within the frame of clearly spelt out objectives of the concern. Besides, the principle of its accountability would need proper definition within the parameters of overall policy. Management productivity should improve to achieve excellence in performance for overall economic development, he adds.

ENSURING EFFICIENCY in management in both public and private sectors of the Indian economy, as also standards of quality of manufactures, goods and services, are areas which will need concerted attention. The highly protected nature of the Indian economy so far has been instrumental in sustaining low standards of management, and quality. Test of efficient management is to ensure production of goods, and services at the lowest possible costs, with highest quality, and competitiveness in the world market. Efficient management has also to be judged whether it will ensure perpetuity of the company. It is essential that the public sector in India both under the Union Government and also the State Governments has to address itself to achieve these essential goods.

An industrial or commercial undertaking, even if it is in the public sector, must retain its commercial character and fulfil the basic commercial obligations. The top management in the public sector undertakings must possess and develop the capacity to take decisions even under conditions of uncertainty, and to implement them as speedily as possible in keeping with the objectives of the organisation.

Managerial effectiveness

What is of utmost importance is the fact that managerial effectiveness must be assessed in relation to the objectives set before the corporate body. Thus, the search for managerial competence logically leads to the successful realisation of the set objectives of the company. The most efficient manager may not be able to deliver the goods if the objectives of the company are not clearly defined. The public sector undertakings may be in many cases at a certain disadvantage in this respect.

In the private sector, the objectives to be achieved by the company are generally well understood. The manager in the private company is to promote and maximise profits and private gains, i.e. the business interests of the company he represents. The objectives of individual public sector enterprises are too general and overlapping to provide guidelines or specific undertakings with varied character and environment.

The Bureau of Public Enterprises organised a seminar on 'Performance Evaluation of Public Enterprises' in 1980. As a result of the seminar, it was recommended that keeping in view the need for achievement of the objectives of an individual public enterprise, specific performance criteria be developed and defined in respect of (a) corporate performance, (b) performance of the chief executive of the undertaking and (c) performance of project management. A beginning had been made in early 1982 in defining performance and financial targets of (a) capacity utilisation, (b) rate of return on capital employed, for each of public sector company for the next two years, i.e. 1982-83 and 1983-84. Various performance targets of each company will naturally need review and updating every financial year, taking into account the emerging role, and profile of each enterprise.

At the level of the individual company, effectiveness standards can be set only within the framework of a corporate plan. Only through a corporate plan can an undertaking hope to serve the twin requirements of

external accountability and internal control. In addition, the corporate plan provides a plan of action, a framework in which the performance of the undertaking can be judged. The need for such a system of performance budgeting is now being appreciated on a wider scale, but one may not be sure if it is really effectively adopted with a view to achieving the objectives of the enterprises in the Indian public sector. A good beginning on these lines has been made recently by public sector companies in the non-ferrous sector.

In the absence of a well worked out corporate plan, managerial effectiveness is adversely affected; in fact, there is also no objective norm to measure this effectiveness. Such a situation might even lead to distorted picture of the working of various enterprises. The top management might look efficient without being effective. This view may need illustration. A sound, technically viable project might get into serious trouble if adequate attention is not paid to the problem of cash flow. In an operational company, production may increase, capacity utilisation may be better, but the cash flow position may deteriorate if the higher production only swells inventories rather than sale. Or, the works in progress may increase showing a perfectly happy balance-sheet position without improving the flow of funds position. Thus, the short-term prosperity of the company may be achieved at the cost of its long-term health.

Reduction of production cost

As mentioned earlier in this talk, the management in both public and private sector in India should reduce considerably the unit cost of production of manufactures, goods and services. In fact this is an area of efficiency in which public sector management has to take strong action to improve matters.

Unit cost of production in India should definitely be lower than that for similar products, services etc. in a developed country. The reasons are quite obvious when one takes into account the wages of labour and supervisory overheads which may not be more than 15 per cent as in a developed country. The capital cost of Indian projects are always pitched much higher than that of a similar project in a developed country. Why should it be so when the component in terms of volume of work involved of labour and supervisory overheads can be approximately 30 per cent in any capital project. With wages which are so low as compared to a developed country, the labour and supervisory portion of the cost in a project should be appreciably lower in India.

At the same time, with judicious use of technology, and careful examination of various components of capital equipment, the cost of capital investment in hardware of a project can also be suitably reduced. The revenue cost of operating a project should also be much cheaper than that of a similar project in a developed country for the same reasons relating to low wages, as also low cost of raw materials. It should, therefore, be the earnest endeavour of all the managers in the Indian economy including those in the public sector to ensure, come what may, that the unit cost of production of any type of manufactures, goods and services in India was lower than

that in a highly developed country. The advantage of cheap labour in the earlier decades in Japan was availed of by that country to make substantial progress in the economic development of Japan. In the present times, the same advantage is being taken by Republic of China, South Korea and Taiwan.

Indian managers have to exert themselves with a great deal of sense of adventure, managerial integrity and competence to fulfil these obligations of producing goods and services at competitive price, so that the Indian economy does not remain a high cost economy, and at the same time we are able to export competitively a large amount of production.

Why do costs rise ?

While talking of efficiency in controlling of project costs, we have also to feel concerned that why cost overruns of projects are between 2 times to approx. 6 times of the original costs, and time overruns are 40 months to 150 months of various types of projects in the country ?

One of the main causes of considerable cost and time overruns of the projects in India are delay in civil construction and erection works at projects. Because of a monopoly market, civil engineering and erection contracting has not improved in India either in their methods or quality. There has been a sea change in these industries abroad. Heavy duty cranes with lifting capacities of about 900 tonnes are in use, assembled modules of 2000 to 2500 tonnes are hoisted and put in position at project locations, huge quantities of mixed cement, concrete are pumped in matters of a few hours into plant foundations, dams etc. We have thus an imperative need to revolutionise our building and plant assembly industries to ensure quick project implementation. This will be one of the major areas of achieving managerial efficiency, and in consequence, it will have a great bearing on the economic progress of the country.

Accountability needs definition

The principle of accountability of the chief executive in a public enterprise to the Government and Parliament would need proper definition. More than one expert committee has recommended that the management should be held responsible only for the total performance of the company, and not for individual day-to-day decisions of the management. It shall need continuous emphasising that ownership should not be confused with management, and that operations of a public sector undertaking should be under a climate of complete autonomy as far as the internal working of the enterprise is concerned.

Too much anxiety and concern on the part of the owners (which may be said to be in the shape of Parliament and the Government) regarding the details of the operations of a company, various decisions made within the company at different levels, can be counter-productive. This may indeed result in diluting even the sense of overall responsibility of the companies. Within the parameters of the overall policy framework, an enterprise should have full discretion and freedom to conduct its affairs without let and hindrance.

Accountability cannot be effective unless the companies have considerable delegation of powers and the companies, in turn, sub-delegate authority at different levels of management.

It may be suggested that once a decision is taken to include a certain project in the investment plan, the project authorities should be allowed to go ahead without any further interference. Similarly, once the specific objectives of a running enterprise are laid down, the chief executive should be called upon to account for only the overall performance rather than individual decisions of the management. To make this possible, it will be necessary to define and demarcate clearly the role, duties, powers and responsibilities of the Minister-in-Charge incharge, secretary of the Ministry concerned and the chief executive of public sector company.

Tenure of employment of public sector managers right upto top levels should be renewable contracts of 4-5 years; but if performance of any supervisor, manager or top level management personnel is not in line with the annual objectives of the company such persons be removed after giving due notice|pay as provided in the contract of employment. Reasonable tenure of employment together with the stipulation of adequate discharge of responsibility will make for an efficient management. Public sector managers, as also top managers may have renewable contracts of say 5 years period till the age of retirement, but the job of any incumbent can be terminated at any time with due notice as provided in the contract of employment, if the performance is not satisfactory.

Productivity of management

The productivity of the top management is the sum total of the efficient team work provided by the personnel of the undertaking at various levels. Strong motivation at all levels will be generated only when there is a sense, and conviction of participation in the operations of a company amongst workers, supervisors, managers and senior management. For this purpose it should be a fundamental concern of the Board of Directors and top management to introduce, and practise participative management in public enterprises. Such a participative management should be on the one hand between all levels of management from the supervisors to the top levels of management on the other hand between management and workers. Such a scheme will need continuous nursing and monitoring so that its effectiveness is ensured.

One of the important factors of managerial efficiency is how knowledgeable are the managers, at various levels, in the art of management, and how responsive they are to the social and cultural aspirations of all those who are working in an enterprise. A great deal of social and cultural cohesion is essential for an effective management. At the same time, the proper induction and continuous training of not only managers at all levels, but more specifically of the senior and top management is absolutely essential. It is usually taken for granted that senior and top management have the desired awareness of how to manage the organisations under them.

One of the basic needs of the successful operation of a company is how much resources the organisation is generating for reinvestment, what net profits it is making, and various other financial aspect of the operations of the company. And yet considerable ignorance does prevail in the awareness, and proper acquisition of knowledge of financial management generally in various types of companies.

A study was made some years ago by an important organisation in a highly developed country of the operations of the public limited companies in that country. One of the major conclusions which was highlighted in this study was that majority of Chairmen and Managing Directors in industry in that country did not know how to appreciate a balance sheet. What can be true of that country which is one of the oldest industrial societies in the world, can be still more valid in India. It would appear imperative that very strong measures should be undertaken for training of supervisors, managers, senior managers, etc. at different levels of enterprises under properly organised short-term induction and training programmes.

At the same time, there is an urgent need for identifying senior managers who are ripe for consideration for top management positions in the board level, and for position of chief executives in companies. These persons should be put through an intensive and short-term training programme of say four to six weeks, in various aspects of management with a strong bias on financial management, use of computers and marketing management. The Bureau of Public Enterprises or any other coordinating organisation may make a list of such personnel and draw up an effective programme, and efforts should be made to complete training in this manner of all the senior managers, as defined earlier, as early as possible, say within 2 years; and later on this can be a continuous scheme for all such senior management personnel who from time to time are ready for consideration for board level and top positions.

In the absence of a body of senior managerial personnel who have been identified and properly groomed for board level appointments, there has indeed always been some sort of a scramble to choose board level executives and top executives in public enterprises from within a very small pool of visible aspirants for these positions. It might possibly be correct to state that, by and large, in many cases there has been, perhaps unwittingly, shuffling of a limited number of persons to fill in various positions at these levels. Such a situation has to be corrected quickly, and arrangements, as has been stated earlier, should be introduced. It may be worthwhile in this context to consider, if instead of providing such short-term induction and training for board level and top level candidates at different institutions, a central institution of public enterprises for this purpose is set up.

Management motivation

Among measures for management motivation, and in consequence of managerial effectiveness will also be the question of managerial compensation. The salaries of managerial personnel in public sector are indeed

low, and taking into account the considerable responsibilities that are attached to various jobs and also the prevailing salaries for comparable positions in the private sector of the economy, it would be absolutely essential to fix managerial salaries in public sector on more realistic and practical basis. Almost all the companies in the public sector are registered as private limited companies under the Indian Companies Act. According to the Indian Companies Act which governs the organisational parameters, operations, etc. of companies, from time to time the Government fixes for the private sector maximum salaries, and other perquisites for board level appointments. Since both the private sector and the public sector are governed by the same Act, it should be possible to fix the salaries of board level and top level appointments in the public sector in line with those in the private sector, as determined by the Government from time to time. While the board level salaries in the private sector within the parameters laid down by the Government have to be approved in individual cases by the Ministry of Law and Company Affairs, in the case of public sector, a rule may be made that these salaries can be fixed by the administrative ministry concerned in consultation with the Ministry of Finance.

Salary structure in other managerial positions in the hierarchy could be fixed in a manner which may have some relationship with the top level remunerations and perquisites. In addition to the aspect of equity and suitable remunerations in the public sector, such an arrangement will also ensure that there is no flight of senior and top level managers from one sector to the other only because of considerable gap in remunerations, perquisites etc. between the two.

In addition to what has been stressed, one gets a feeling that there is a great need to enthuse the management of public enterprises to achieve the great goals for which public sector has been set up as a strong instrument of economic development of the country. Some of the major steps for improvement of management effectiveness in the public sector have been briefly mentioned, but another very important aspect is the overall psychological improvement within the public sector.

One of the steps in this direction should also be to ensure that persons working within the public sector do not provide a running critique against this sector. Those who do not believe in the role of the public sector should not join it. Unless there is commitment to an organisation, no good performance can be achieved.

Contribution of public sector

Public sector has so far contributed a great deal to the overall economic development of the country, and in fact, has been responsible for not only ensuring a reasonable degree of development of the economy, but also having effectively contributed to the defence of the Motherland at different times by turning out radar equipment, tanks, aircrafts, guns and various other armaments without which the country could not have been defended. In many cases due to deep rooted bias, and motivated propaganda, public sector has been used as a convenient 'whipping boy' and there

has been from time to time in different forums an underserved damnation of the entire public sector. Such an attitude has to change not only by still better performance of the Public Sector, but also by the positive thinking of those organisations, who misguided as they might have been in the past, have been having a prejudiced approach towards the public sector. It has to be accepted that the public and private sectors have both their own respective roles to play in the accelerated economic development of the country, and there is no place for gunning of one sector by the other. Management improvement is indeed essential both in private and public sectors, if we have to achieve excellence in our performance for the overall economic development. In this task public sector has indeed a great role to play. □

Handloom export production projects

THE UNION MINISTRY OF COMMERCE has initiated necessary steps to take up new handloom export production projects, particularly in the hill areas of Uttar Pradesh, Himachal Pradesh, Jammu and Kashmir, and North-Eastern States. An outlay of Rs. 50 lakhs has been provided for this purpose in the current year, 1984-85.

Launched in 1975-76 these special export production projects are set up to produce high quality goods for catering to the foreign markets. Through them necessary organisational infrastructure with a package of assistance like supply of inputs, credit, marketing, etc., are provided to the weavers outside the cooperative fold.

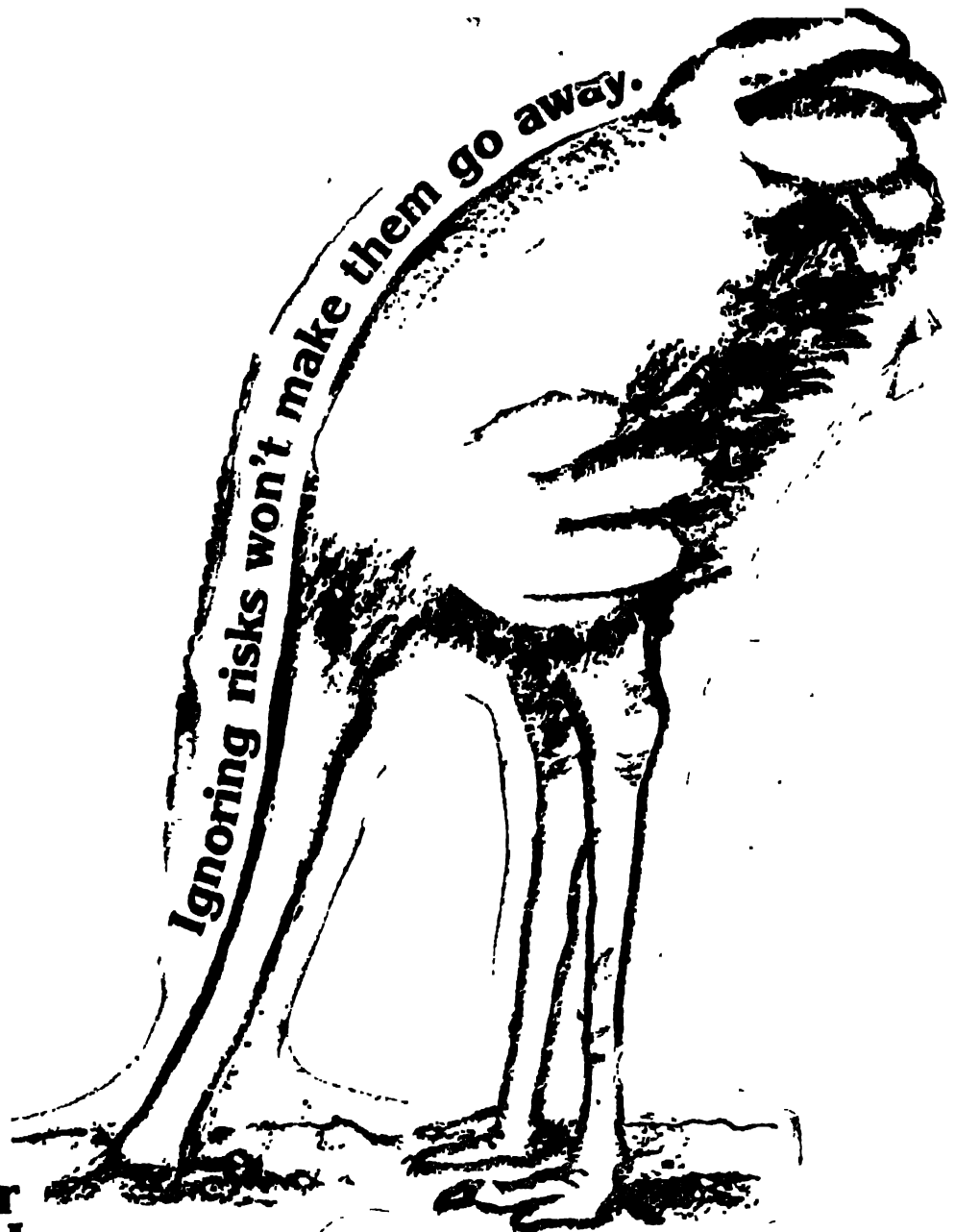
Since the inception, 21 projects each with 1000 looms have been sanctioned in the handloom centres throughout the country. These projects are being implemented by the State Handloom Development Corporations and are funded completely from the Central Plan. □

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How should it be judged ?

S. Samarapungavan

The performance of public sector enterprises should not be judged on the scale of profitability aspect alone, ignoring the contributions made by it in discharging its socio-economic objectives. Aspects like development of backward areas, providing public utility services at subsidised rates, selling basic inputs or products at administered prices, generating employment, providing basic amenities to its employees, should also be taken into account. A determined public sector management with functional autonomy is bound to improve its efficiency which is vital to the national economy, says the author.

PUBLIC SECTOR ENTERPRISES have been one of the major instruments used by Government ever since it embarked on a sustained policy of planned development. These have been established over the years in all the spheres required for industrial development.

The spread of public sector, industry-wise and region-wise, the sophistication of technologies employed by them, the employment opportunities provided and the level of management techniques employed, are as striking as they are significant for the future development of the country's economy. There are today 223 public sector enterprises (as on March 31, 1983) as against only five in 1951 when the planned development started. The investments in public enterprises have also risen from a mere Rs. 29 crores to Rs. 30,039 crores during the last 32 years.

The ten public enterprises with SAIL at the top, account for more than 50% of the total investments.

While, the capital investment has increased around five times, the total gross turnover has increased over six-fold during the last ten years rising to over Rs. 41,000 crores during 1982-83. The gross margin has increased more than eight-fold during the above period rising to a record Rs. 5189 crores during 1982-83.

Apart from Central Government enterprises, there are over 500 enterprises owned and controlled by State Governments; though the average size of a State Government enterprise is smaller than that of the Central Government enterprises, they also do play a significant role in the economy of the country, and its development possibilities.

Why was it created ?

In India, public sector was resorted to because of India's need to develop at a rate faster than what would have been possible otherwise, relying on public initiative and enterprise. A substantial amount of investment had to go for creation of infrastructural industries like power, steel, machine tools, etc. These were the areas where investment is large, gestation period is long and return on investment generally meagre. The consumer sector, by and large, has been left out for private entrepreneurship except in a few cases where Government has deliberately entered with a view to checking the upward rise of prices.

The public enterprises also include a large number of units which are taken over after becoming sick in private hands. Several public enterprises have come up in backward regions only because of the need for a balanced development of the country, though in several cases such locations have reduced their economic competitiveness.

Its objectives

It is now generally accepted in our country that the broad objectives of public enterprises are : to help in the rapid economic growth and industrialisation of the country and create the necessary infrastructure for economic development; to earn return on

investment and thus generate resources for development; to promote re-distribution of income and wealth; to create employment opportunities; to promote balanced regional development; to assist the development of small scale and ancillary industries; and to promote import substitution, save and earn foreign exchange for the economy.

How has it performed ?

Against these objectives, let us have a quick glance at the actual performance of the public enterprises.

The public sector enterprises have significantly contributed to the growth rate achieved in the industrial production during the first four years of the Sixth plan. Public sector accounted for 97.9 per cent of coal, 100 per cent of lignite and petroleum crude, 77.8 per cent of saleable steel, 20 per cent of aluminium, 100 per cent of copper and lead, 84 per cent of zinc, 46.3 per cent of nitrogenous and 29.3 per cent of phosphatic fertilisers, 100 per cent of telephones and teleprinters during 1982-83. These items are the basic industrial goods needed for country's development.

Though, the annual rate of growth of turnover was not even during the last ten years, it averaged an impressive 23.22 per cent. The capital invested in public enterprises rose by 3.8 times during the last ten years and the peak investments had been in the key core sectors—Steel (Rs. 5149 crores); Petroleum (Rs. 3034 crores); Coal (Rs. 3268 crores); Mineral and Metals (Rs. 2639 crores); Chemicals, Fertilisers and Pharmaceuticals (Rs. 3819 crores) and Engineering (Rs. 2746 crores). The ratio of turnover to the capital employed also rose steadily during the last ten years to 158 per cent in 1982-83.

Financial appraisal

Coming to traditional methods of financial appraisals, making use of such tools as return on investments, it should be appreciated that it will not be appropriate if such an assessment is limited to profitability aspect alone, ignoring the contributions made by the public sector in discharging their socio-economic objectives. Thus, aspects like development of backward areas, providing public utility services at subsidised rates, selling basic inputs or products at administered prices, providing medical, educational and housing facilities to employees, etc. also need to be taken into account.

Nevertheless, the public enterprises collectively had uniformly showed gross profit to capital employed at rates varying from 6.33 per cent to 13.05 per cent over the last ten years. While, the gross margin to capital employed varied between 11.24—19.52 per cent, it is significant to note that during 1982-83, the public sector enterprises achieved the highest pre-tax profit of Rs. 1,545 crores after an interest burden of Rs. 1924 crores. The financial performance of the public sector enterprises, as has been already pointed out, should be viewed against the facts that public sector functioning in different segments of industry is facing divergent constraints.

Steel industry, for example, has been passing through the worst recession in the history. The pace of indigenous growth of steel demand has started slackening since 1982-83. To make situation worse, 1.317 million tonnes of imported steel, including a spill-over of over half a million tonnes from the previous year, arrived during 1982-83. As a result, SAIL was saddled with a total stock of 1.562 million tonnes of saleable steel as on April 1, 1983 (including IISCO).

The high interest on borrowed funds, mainly arising out of larger bank overdraft due to accumulation of stock of saleable steel as well as repayment of loan and interest to the Government, together with escalation of input costs, were the main reasons adversely affecting the working results of public sector steel industry.

During 1983-84, the emphasis was to improve liquidity and to reduce import of steel. The stock holdings were reduced by around 770,000 tonnes by various fiscal measures; such as, extension of credit facilities and price adjustments and making certain categories of steel available to domestic consumers at international price to help them boost their exports.

The emphasis on production of special and high-value items has also been able to reduce imports to only 450,000 tonnes during 1983-84. The profitability, however, can not significantly improve unless the increase in the cost of inputs are adequately taken care of. Mention also may be made of Kudremukh Iron One Company which though completed in a record time, could not start any significant production due to the failure of Iran to lift the concentrated ores.

Generation of internal resources

During 1982-83, there were 115 public enterprises generating Rs. 2270.83 crores of internal resources out of depreciation and retained profits. Admittedly, this is not a very high figure compared to the investments. Considering the need for the units to be modernised, particularly in a situation when the prices of equipment as well as technology continue to be high, the importance of generation of internal resources in public enterprises cannot be over-emphasised. It should be, however, pointed out that almost always, the public sector industries had to operate within the control of an administered output price when selling was easy. Since volume of output in key and core sectors can not be raised quickly, the generation of surplus was not high in public sector industries even when demand was adequate.

On the other hand, there had been a sizable contribution to the Central exchequer from the public sector. For example, a total of Rs. 5529 crores were contributed by the public sector during 1982-83. Steel industry in public sector alone contributed Rs. 936 crores during 1982-83.

Foreign exchange earnings

The total foreign exchange earned by the public sector enterprises during 1982-83 amounted to Rs. 4694 crores which was 70 per cent more than the

previous year's figure. Notable is the achievement of the contract and construction group of enterprises which have now increased their activities in the international field and have made considerable progress in procuring and executing foreign contracts worth over Rs. 469 crores.

For those goods where domestic market continues to be sluggish, like steel, vigorous efforts are being made to increase exports which will not only improve the foreign exchange earnings but will also help in improving capacity utilization.

By the end of 1982-83, public sector enterprises employed over 20 lakhs of people with an average per capita annual emoluments of more than Rs. 18,000. It may be pointed out that while the average All India Consumer Price Index had increased by 135 per cent during 1972-1982, the average emoluments for public sector employees had risen by 210 per cent in the same period. The public sector enterprises had by 1983, 18.3 per cent Scheduled castes and 8.4 per cent Scheduled tribes persons in their employment.

As a model employer, the public enterprises have been providing housing and welfare amenities to the employees. Almost all public sector enterprises have built townships with adequate educational, health, shopping and other recreational facilities. So far, 5.48 lakh houses have been built for employees and the amount spent on various welfare activities (other than capital expenditure) during 1982-83 itself was Rs. 378 crores. Several public sector enterprises have also contributed to the development of the area adjacent to their works or township by adopting villages and providing basic amenities like water, sanitation and hospital.

The development of ancillary industries started only since the beginning of the seventies. By 1982-83, there are 1176 ancillary units which had provided services worth more than Rs. 280 crores.

Issues and challenges

There is certainly ample scope to improve performance including profitability for the public sector enterprises notwithstanding the drag of social liability. It may be emphasised at this point that public enterprises differ so widely in their background, history of development and nature of goods manufactured and services rendered that it is impossible, and rather unwise, to use the same yardstick to judge their performance. For example, out of the 196 operating enterprises listed by BPE, 141 are producing goods varying from basic goods like steel, coal, petroleum to consumer goods and agro-products, and 55 enterprises are engaged in rendering services which range from trading and technical consultancy to tourism. There are, however, several common important issues relevant to the performance of public enterprises. These are elaborated below :

The single most important issue in the performance of the public sector units is the quality of internal management. The efforts for improvement have to be persistent and not sporadic spurts of remedial measures if the gains of good performance are to be consolidated and further improved upon.

The factors which are within the control and competence of public sector management themselves are—such as recruitment of proper personnel in keeping with the job description; avoiding over-staffing; rationalisation and review of procedures and decentralisation of powers; evolution of an effective and workable system of two-way flow of Corporate decision-making information; imparting stimulus to participative management; career development and training of marginal personnel and other employees; cost reduction; standardisation; scientific cost management; inventory control; maximisation of capacity utilisation; maintenance and upkeep of the plant and machinery, control over expansion activity; keeping the cost and quality consideration in constant view.

Co-ordination with other sister concerns in the public sector in regard to purchase and supply of inputs and outputs; developing a sense of competition of the market place; absorption, development, and innovation of new technology and above all preparation of corporate plans for further development. This list is long, but proper functioning of any enterprise, public or private, has to take care of these factors. For uniformity and continuity of efforts, it is desirable that the top executives of the public sector enterprises should not be frequently shifted.

A case for autonomy

Autonomy is very vital for the smooth functioning and development of public sector enterprises. Though autonomy without accountability is not advocated, what is required is extension of autonomy generously and purposefully with the prescription of accountability of a judicious nature and order, even in times of bad showing by a public enterprises. The presence of professional managers is also an essential pre-requisite of autonomy.

If the overall profitability of the public sector is to be improved the various financial parameters like capital structure, method of financing, pricing policy, etc. would need to be reviewed and set on sound logical base. Past rigid control on price had not yielded reasonable return on investment which is now throttling the growth of many industries. The equity/loan proportioning also needs to be rationalised for optimum returns.

One of the major problems in the public sector has been the inordinate delay in implementing a project. It is quite common that by the time a project is completed the actual cost becomes 100-200 per cent more than the original estimate leading to a situation which makes a viable proposition uneconomic. One of the major reasons for this delay is due to endeavours towards maximum indigenisation. Since the equipment/parts are to come from different agencies which vary in their supply capabilities. Often supplies are inordinately delayed and difficult to coordinate. While self-reliance has to continue and indigenous industry has to be supported, there has to be a balance between timely supply of capital goods and equipment for projects and maximum indigenisation.

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Performance during 1983-84

Yojana Correspondent

THE PERFORMANCE of Central Public Enterprises as a group shows a mixed trend in terms of improvement and decline in productivity as also profits and losses during the year, 1983-84.

According to the Planning Commission monitoring report on the performance of the 20-Point Programme under Point No. 20 relating to performance of Central Public Enterprises under Bureau of Public Enterprises, the turnover increased from Rs. 41984 crores in 1982-83 to about Rs. 46250 crores in 1983-84. The gross margin in 1983-84 also increased from Rs. 5189 crores in 1982-83 to about Rs. 5425 crores during 1983-84. The overall profitability after interest, tax and depreciation, however, shows marginally a negative picture. The profitability, in terms of gross profit to capital employed, shows decline from 13.05 per cent in 1982-83 to 10.66 per cent in 1983-84. One redeeming feature relates to the generation of internal resources, which is of the order of Rs. 3200 crores as compared to Rs. 2756 crores in 1982-83.

Physical performance

The performance of enterprises producing coal, lignite, aluminium, zinc, lead, copper, crude oil, crude throughout, cement, drugs and pharmaceuticals, engineering goods, consumer goods products, such as artificial limbs, condoms, ophthalmic glass, newsprint, textiles, photo films etc., shows improvement during 1983-84 as compared to the corresponding period of previous year.

Fertilizer production in public sector in terms of 'N' as a whole shows increase from 1586 thousand tonnes in 1982-83 to 1660.5 thousand tonnes in 1983-84, reflecting an improvement of 5 per cent. The capacity utilization of public sector fertilizer 'N' as a whole also registered improvement from 53 per cent in 1982-83 to 56 per cent estimated for 1983-84. There has, however, been deterioration in fertilizer 'P₂O₅' from 44 per cent to 48 per cent in the same periods.

A number of other industries recorded fall in production during the year under review. Steel ingot and saleable steel production declined by 11 per cent and 16 per cent respectively. Production of iron ore lump by NDMC showed fall by 6 per cent and of gold by BGML a decline of 13 per cent.

In the engineering group, deterioration in the performance level was observed in respect of Lagan jute, ITI, Hindustan Teleprinters, Bridge and Roof, Bharat Earth-movers, Cochin Shipyard, Hindustan Shipyard and Scooters India.

Consumer goods sector recorded a fall in production of paper by Mandya National Paper Mills, products manufactured by Rehabilitation Industries Corporation, etc.

Target achievements

Target achievement of major group of industries based on the original target during 1983-84 reflected 79 per cent achievement for steel ingot, 83 per cent for saleable steel, 99 per cent for coal, 106 per cent for lignite, 113 per cent for aluminium, 97 per cent for zinc, 86 per cent for lead, 88 per cent for copper, 98 per cent for iron ore, 84 per cent for fertilizer 'N', 82 per cent for fertilizer 'P₂O₅', 99 per cent for petroleum crude, 104 per cent for petroleum throughput, 82 per cent for cement and above 80 per cent for engineering goods (heavy industry).

Those exceeding their target

The undertakings which exceeded their targets 100 per cent and above during the year, were Central Coalfields, Western Coalfields, Neyveli Lignite Corporation, BALCO, Uranium Corporation, ONGC, RCF Trombay, Balmer Lawrie, Burn Standard, Praga Tools, Triveni Structurals, Bharat Wagon and Engineering Co., BHEL, Richardson and Cruddas, HMT, Bharat Process and Mechanical Engineers, Bharat Pumps and Compressors, Instrumentation Ltd., Tungabhadra Steel Products, National Newsprint and Paper Mills, Cycle Corporation of India and Mazagon Dock.

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4

The political system

The historical features

BEFORE WE COME TO the present political scene, it would be desirable to briefly trace the broad historical features of Indian polity. India is one of the oldest among existing civilisations and probably one of the few whose past civilisation has a continuous link with the present. If we go back to the Indus valley civilisation, it is clear that the people of that age were fairly advanced and had some concept of community living and town planning. They had also developed a system of navigation and irrigation. The Aryans came with their own philosophy evolved over a thousand years of their journey down from the Arctic regions with their cattle in search of warmer climes and new pastures, and having been constantly required to fight their way, they possessed a better method of warfare and better weapons.

In the Indus valley, because of its fertility and richness, life was probably stable. People had become used to a soft life. It was then that the powerful Aryans, eager to find a land for their survival, came in. But obviously, over the years these people too got influenced by the developments, knowledge and environment of this region surrounding the Sindhu river.

At this stage, it would be interesting to note that the river Sindhu, which in Sanskrit means a vast mass of water like the ocean, was pronounced as 'Indus' by the Greeks, and later as 'Hindu' by the Persians. That is how the name 'India' came to be used for the land of Indus. The name 'Hindustan' came from the word 'Hindu' which was the pronunciation in Persian of the word 'Sindhu'. The word 'Hindu' is not found in any of the religious or even more ancient Vedic texts and, therefore, I have often wondered how the term 'Hindu religion' came to be accepted over the years. It is as good as saying that the religion of the people of India is Indian. I am saying this because the word 'Hindu' itself cannot connote the concept of the religion unlike other religions, like Christianity, Islam and Buddhism. I will further discuss this when I come to the development of religion, but suffice it to say at this stage that the people who came in got

absorbed with the original inhabitants of the Indus valley who had a well-developed civilisation and it was with this added vitality that they progressed further down and across the whole valley of the five rivers, i.e., Punjab. Coming to the Ganges, a very rich culture developed over a period of a few thousand years with a highly limited population and land which had a rich potential in agriculture, cultivation, cattle rearing and horticulture. The scenic beauty was good enough to inspire thinkers and poets.

No wonder that such a society could produce persons who wanted to know the secret behind all the wonders: the gifts of nature with huge mountains like the Himalayas and the wide ocean-like rivers giving life to the whole land. It is thus that Vedic thoughts expanded and thinkers kept on searching and inquiring till they felt that they had arrived at the truth. A notable feature of this period of growth was that the inquiry was not inhibited and studies were made practically in every sphere, including medicine, astronomy, mathematics, engineering, architecture, arts and literature. The one inhibiting factor was the lack of growth of the art of writing and printing, which prevented the preservation of the knowledge and its mass availability.

Hence, knowledge had to be transferred perforce from generation to generation from one person to another by the teacher to his pupil or by the father to his son, and it is amazing that by this system, generations were taught to learn the texts by heart, not only of philosophy but of other branches of knowledge also. The skill remained restricted and confined to families and classes which later on got stratified into what are known as 'castes'. It is easy therefore to see that most of the castes were vocational and even named accordingly. Society as a whole was broadly categorised first into those who were totally devoted to the pursuit of knowledge and learning which had to be a very rigorous system because, as I have said earlier, everything had to be memorised and the minds virtually had to become small computers which could reproduce precisely what was taught to them by their teachers and also contribute

to further growth. The pursuit of knowledge was called the pursuit of the ultimate truth, i.e. Brahman, and hence those who were dedicated to this field were called the Brahmins.

The next important class was the one devoted to the defence and protection of society and the social system. The leader of this class was the king and the people who were trained from childhood in the art of society and warfare were known as the Kshatriyas. Those who looked after the lands, the trade and the distribution of goods were known as Vaishyas and those who did mainly manual labour were called the lowest of the classes, i.e., Sudras. But it is significant that although birth gave an initial advantage, because knowledge had to be passed on generally from father to son, yet the classification was not restricted entirely to birth in the earlier period. It depended on the merit of the individual, and there are many instances where people born in one class, or a family belonging to a particular class, were accepted in another class because of their merit. Indeed, the supreme heads of even the most coveted of the intellectual class who were called seers or Rishis are known to have been born mostly in families of classes other than Brahman. They have been the founders of an institution called ashram, to which students came from all strata and were imparted the knowledge acquired by these learned seers.

Obviously, these learned men and their institutions were the most respected because it was from them, like in modern laboratories and research institutions, knowledge in various fields was acquired and transferred to people working in their respective branches. It, therefore, needs to be emphasised that the basic four classes were not based on birth or an identifiable caste system. This was more a convenient classification for the smooth functioning of the social order based mainly on merit and capability which required specialisation over a long period of study and training. Therefore, the most authentic and oft quoted texts on this subject also do not talk in terms of birth as the basis of the classification. The famous quotation of the Bhagavad Gita:

(This means that the classification of the society into four divisions, has been made on the basis of guna, i.e., qualities and merit, and karma, i.e., activities or actions, not birth.)

Thus, an individual's ability to perform in a particular field of action got him his classification. That there was this free flow and absorption is borne out historically by the fact that in the earlier period when people came from outside, they got easily absorbed into the wordly social fabric according to their merits. For example, in the earlier period, the Shakas, the Huns and the Greeks were soon absorbed into respective castes in the society. Even the origin of the clan of Chitpavan Brahmins to which the author belongs is attributed to some Greeks who probably, instead of returning with Alexander, came via the coastline from the mouth of the Indus along the western coast and settled down in an area known today as Konkan. The Greeks must have got absorbed into the highest strata, both because they were proficient in the art of warfare as well as in the

pursuit of learning. It is surprising that this clan has, even till today, maintained some of its distinctive features although over a few thousand years much diffusion has taken place. But that again is mainly because of the system of knowledge getting transferred from father to son, family to family and remaining restricted in certain families which continued over a period of generations.

I am stating this only to emphasise the point that the modern caste system has no sanction in the original texts and it has only grown out of social functional necessity. It is only in the later period, when society got stabilised and vested interests developed in the form of feudal lords and also in the class to which learning got restricted, that stagnation started. This led to restrictive precepts and practices getting consolidated into an arbitrary and unjust social order based on a birth-oriented caste system.

A social order in which knowledge and expertise passed from generation to generation and family to family in the initial stages had its own advantage, because it helped develop expertise in practically every field of knowledge and art. The skills acquired by people thus without the art of writing being widespread is indeed amazing especially when you consider the marvels of craft and beauty on the temples and the structures like the Taj, Khajuraho, Ajanta and Ellora.

The same thing happened in the fields of science and literature which produced giants like the epic-writers of Ramayana and Mahabharata and further down, Bhavabhuti and Kalidas. The other famous persons include grammarians like Panini, mathematicians like Aryabhata and Bhaskara, soldiers like Chandragupta and Samudragupta, political philosophers like Kautilya and medical scientists like Susruta and Charaka. All this shows that the system had its own inherent advantage. Only when it got stratified and began stagnating that the urge for gaining new knowledge was lost probably because of an easy life and the preacher class acquired a dominant position. Then, it joined hands with the ruling class to evolve theories and customs in order to keep the rest of the society frightened and suppressed through blind faith.

It is this which brought forth a major rebellion in the form of Buddha, who decried the blindness arising due to the superstitious acceptance of the dicta of a particular class. He tried to revive the old passion for thinking and asked people to accept only that which appealed to the intelligence, that is, buddhi. It is from this word that the name 'Buddha', the intelligent, originated. It is a tragedy that many years after his preaching, his followers tried to deify the Buddha and to codify his teachings so that also became one more dogmatic religion. Codes of conduct are useful for any society at a given time, but the moment they become restrictive and there is an insistence that those codes alone have to be accepted, then the divisive constraints begin to operate, dividing human society into conflicting groups. Buddhism could not become a separate identifiable religion in India because there was no single identifiable religious system in India before the stagnation set in.

As already stated, the process of evolution, adaptation and growth had been a continuous one. That is why the code of life, which is the nearest to the world dharma, has been called Sanatan—meaning continuing—and, again, it is beautifully described in the famous philosophical thesis, the Bhagvad Gita.

(Whenever stagnation comes over the whole conduct of life, that is dharma, and there sets in a state of lethargy, then, to awaken such a society, I (the eternal energy) come again (is born again).

Therefore, the later seers like Shankaracharya accepted Buddha as the incarnation of the supreme.

Talking of incarnations, it is interesting to note that all the ten incarnations of the ancient Vedic pantheon fit beautifully into the modern theory of evolution. Beginning with *matsya* the fish, then the amphibious *koorma* the tortoise, *varaha* the bear, *Naraimha* (half animal and half man), *Vamana* the dwarf and *Parasurama* the warrior, *Bama* is just and benevolent kind, *Balarama* the cultivator, Krishna the cowherd. Buddha the enlightened and now Kalki the horse rider.

I have no doubt that if the philosophy of Jesus Christ or that of Prophet Mohammad had come to India before the Adi Shankaracharya, he would have adopted them as subsequent incarnations because no method or form of worship has ever been considered as alien to the Indian system of life or dharma.

Over a period of thousands of years, great seers and teachers have laid down rules for a smooth conduct of life and since these rules or laws were accepted as being useful by the kings as well as the people they were incorporated in the entire concept of dharma, the way of life.

It is because of this basic flexibility that civilisation and culture in India have survived in an unbroken, continuous manner for more than 5000 years, whereas some other civilisations have disappeared.

Paradoxically although there is this flexibility and catholicity of outlook, the social structure crystallised round the family vocation, known as 'caste', into such watertight compartments that for anyone not born into the caste system it became well-nigh impossible to be absorbed by conversion. Thus, it led to only a one-way traffic; whereas the people, later on called Hindus by the Persian invaders, could get converted into Islam or Christianity, in spite of the strenuous efforts by some reformers, either reconversion of even original conversion to 'Hinduism' became an impossibility, because unless a person came into the fold of one of the castes and was accepted as such, he could not be considered as part of the stratified system called the Hindu religion.

The caste system came into existence mainly on the basis of vocations, which continued to survive and grow in families generation after generation as the knowledge of a particular vocation or trade was passed on from one generation to another. Although originally this was not restricted to birth and people could go on to vocations according to merit, yet, in practice, by the very nature of things, vocations, crafts and

trade became restricted to the families and to groups which later on developed into castes. These vocations over a period of time got social and religious sanction which in the Indian context became more or less a code of social order. As the vocations of learning and warfare as well as trade normally gave greater power to those who were well versed in these branches, these castes and classes came to be considered to be superior, and vocations which were mainly of manual nature were treated as belonging to lower castes. Unfortunately, some of these manual activities were treated as unclean and the castes who were wedded to these were treated as untouchables. This virtually developed into a scourge. The Indian society has indeed been plagued by this cancer of caste system and it is high time that this system was done away with.

Social and even religious reformers have tried hard for hundreds of years to eradicate this disease of the caste system, but because castes are closely linked to vocations, it became well-nigh impossible to do away with this malady. But now in the modern age, when the whole method of education as well as vocational training and industrial growth has made it possible for people to go into different vocations other than those they were born in, the whole basis of the caste system has undergone a fundamental change. Today, the son of a Brahmin, who was considered to belong to the uppermost caste, serves as a salesman selling shoes and yet he is not supposed to belong to the caste of a shoe-maker. Similarly, one born in the so-called lower castes gets educated and becomes a lecturer or professor or a doctor, and yet he is not considered as belonging to a higher caste given to learning.

I have often felt that the best way to do away with this caste system is to remove all identifying factors which go with the name of a person. Earlier, people used to, even in the census, mention their caste or religion. But as the caste system has been abolished by the Constitution, particularly the one dealing with untouchability, it is no longer mentioned in the census. And yet, somehow, religion comes to be mentioned and in the Hindu religion caste is identified with certain surnames. The best thing would be either to abolish the surnames or for the so-called lower castes to adopt the surnames of the uppermost castes. If this is done, within a generation or two, all outward identifying factors would disappear. Along with this, it is important to note that although the original intention in giving reservation for the benefit of people coming from the lower castes was laudable, yet, these very privileges and reservations tend to perpetuate the caste system by carrying the stamp of identification along with it. Could it not serve the purpose if the benefits and privileges were to be given mainly on an economic basis? Because most of the backward castes or communities belong to economically weaker sections they would automatically be the people who would get the main advantage based on economic backwardness. This will also benefit religious minorities who do not get the privileges given to the backward castes.

Today, we find the strange phenomenon of practically every weaker section demanding to be included in the category of scheduled castes and scheduled tribes just to secure certain privileges and reserva-

tions which are nothing else but economic benefits. But because they are associated and connected with the caste system, this caste system continues to be identified making it practically impossible for its abolition. I know it is not easy to deal with this problem which has prevailed over thousands of years. But unless serious thinking and drastic remedies are taken to eradicate this highly discriminating and degrading phenomenon, it would be difficult to find a lasting solution to this problem of treating a human being as a human being on merit and nothing else.

Sometimes, I feel that if the religious heads, the Shankaracharyas of the main four branches of the *Sanatan dharma*, that is the Hindu religion, were to come together and pronounce that the caste system based on vocation and birth had lost all its significance in modern times and abolish the caste system altogether, I think they would bring about a revival of the free flow of the *Sanatan dharma* in its true spirit.

Without going into the details of history, we know that people who were the followers of Islam and many more who got converted into it have dominated the political scene for nearly a thousand years as rulers of a major part of India, which they adopted as their land, particularly in the northern territories. Apart from Islam's influence on the socio-political life, it also had an historical impact, and even the East India Company, having come to trade, found that they could, by supporting one ruler against another in this vast sub-continent, establish their imperial authority in India. The role played by the two major religious forces, viz., the *Sanatan dharma*, and Islam, is well known. Ultimately, it led to the division of India not so much because the people belonging to the two religions could not stay together, but more because both felt that in a free India they should have the unrestricted right to govern and rule. And the British rulers saw to it that this polarisation not only took place but was sedulously aggravated at every stage, leading eventually to the savage surgery of partition in the very ecstasy of freedom. □

(Next Issue : Post-independence scene)

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Computerisation of land records

M. Rama Rao

ANDHRA PRADESH is setting a new trend in the preparation and maintenance of survey and land records. It has been decided to computerise the whole process and store the data in a computer with expandable memory so that required information can be recalled at the push of a button. By the end of seventh plan, computer centres will be opened in each of the twentythree districts of the state. These will be connected to three regional centres covering Telangana, Rayalseema and the coastal belt, which, in turn, will be linked with the main centre in the state capital of Hyderabad. Computerisation will revolutionise the collection of agricultural statistics, exhaustive and comprehensive upto date land registers and records and the maintenance of land revenue accounts. Andhra Pradesh has over two : three crore survey points spread over its twentythree thousand villages. The data in respect of each land holding, namely the extent of the land ownership, soil fertility, crop practices and land revenue assessment is at present collected manually and recorded in three copies of which one is available with the Village Officer. The second copy is maintained by Revenue Officer of the area, while the third copy is in the hands of land records Officer at the state level. Although an exercise of checking these records is carried out by the Tehsildar, in the name of Jama-bandi, complaints pour in the Collectorate at the district level and the Secretariat at the state level everyday that correct land particulars are not available. Endless litigation is a natural corollary of such a situation. Admittedly it is practically impossible to update the records when change of ownerships has become a regular feature. The absence of precise data has been hampering the implementation of land reforms. The traditional distance measuring technique for land surveys are also being modernised. It is a common sight not only in Andhra Pradesh but also in most places in the country to find that surveyors gauge distances with a telescope like instrument known as the Odelite with chain pullers measuring the distance. This method takes five days to measure three to four kilometres.

Sophisticated gadget

The traditional equipment is now being replaced by a sophisticated electronic gadget manufactured indigenously by the public sector, National Instruments Limited, Calcutta. So far only the survey of India has been using these gadgets.

The Geodetic distance measurement equipments are electronically operated through a micro processor control. Its working principle is based on emission, reflection, reception and processing of the infra red rays which constitute the invisible eye. Naturally this drastically cuts down the amount of manual labour in field surveys, and also the time taken for such exercise. Work is speeded up by ten to fifteen times. The new electronic instrument will complete the work presently carried out over five days in just two or three hours. These instruments will make large scale boundary demarcations easy even in the hitherto inaccessible tracts. These will provide precise and accurate information. These instruments will be supplied to each district in the state in the next five years. The state government says that after the use of these instruments, the data available with the people would be such that there will be little or no room at all for inter-village, or inter-district boundary disputes. These will also help in curbing land feuds in the villages □

(Courtesy : All India Radio)

All-time high fish production

AN ALL-time high production of 16.04 lakh tonnes of marine fish landings was recorded during 1983-84. This amounts to a quantum jump of 11 per cent over the previous year's production of 14.44 lakh tonnes.

The factors for increase in marine production over the years include improvement in the deep sea and inshore mechanised fishing fleet and berthing and landing facilities for fishing vessels. The increase in 1983-84 may as well be ascribed to the better fishing season for offshore pelagic fisheries. □

Guns or butter: can the world have both ?

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These are but two random examples of the benefits of diversion of military expenditure to social and economic development programmes. Sweden's Under Secretary of State, Ms. Inga Thorsson, dismisses the thesis that military spending can contribute to employment generation and that money spent on armament does not retard economic development.

Colossal military expenditure

According to her "Conservative estimates suggest that global industrial production for military purposes in 1980 amounted to more than \$ 127,000 million, 9.5 per cent of which took place in the industrialised countries. World-wide military expenditures, as a whole, however exceeded the astounding level of \$600,000 million, perhaps \$650,000 million by 1982, representing 6 per cent of the total world output for that year. This amount is roughly equivalent to the value of all investible capital in all developing countries combined."

Equally significant is the fact that roughly 20 per cent of the world's qualified scientists and engineers were engaged in military work in 1980. In fact military research accounted for more financial and intellectual resources of the world than those devoted to research and development on health, food production, energy and environmental protection combined.

Trade in arms

According to Ms. Thorsson, the international trade in arms amounted to about \$35,000 million a year, 75 per cent of which accounted for by purchases by developing countries. "It is not true, however, that the developing countries generally squander vast resources on armaments, although the overall trends are frightening", she says. "The share of world military expenditures incurred by the developing countries grew during the 1970s from 9 to 16 per cent. One should not forget that it

has been the scene of almost all of the roughly 140 wars that have been fought since 1945. In any case, this 16 per cent of world military expenditures is split among some 125 developing countries while only 35 industrial countries consume the remaining 84 per cent"

Ms. Thorsson dismisses as a fallacy the argument that military spending is beneficial inasmuch as it increases national security, creates jobs and generally stimulates civilian economy. "Military outlays fall by definition into the category of consumption and not investment. When they are steadily high or increasing, they tend to depress economic growth."

If half the funds spent on armaments throughout the world from 1970 to 1975 had been invested in the civilian sector, the annual output at the end of that period would have been \$200,000 million higher than it actually was—a figure in excess of the aggregate GNP of Southern Asia and the mid-African regions. And this growth, according to Ms. Thorsson, would most likely have been achieved without any extra demand for investible resources.

ILO Feature

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THE NUMBER OF CATTLE, including other livestock, insured under various Animal Insurance Schemes, crossed one crore mark in 1983.

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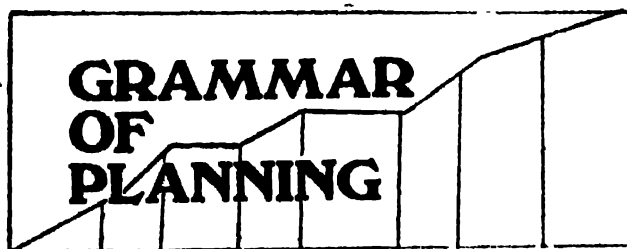
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P. R. Dubhashi

The spatial planning

Describing 'Sectoral Planning' as a planning methodology aiming at consistency between the aggregate growth rate and the sectoral growth rates (see the last issue), the author here explains the spatial planning which is built round the concept of area development identified by economists as metropolitan regions, river valley areas, industrial belts, geographical complexes, mining areas, catchment areas, flood control areas, etc. "to provide locational dimension to planning and help in giving an operational reality to them".

WHILE IN THE PREVIOUS CHAPTER we have considered the planning methodology in national aggregative terms, it is obvious that, in a large country, planning has to be for sub-national units like the State or the Republic, the district, the block and the village. If one set of methodological problems arises in connection with the formulation of sub-plans for sectors, another set of methodological problems arises in formulation of sub-plans for these sub-national units. Just as there is the methodological problem of breaking up aggregative plans into the consistent set of sectoral plans, there is also the methodological problem of breaking up the national plan into a consistent set of plans for constituent units. Just as a view is expressed that rather than going from aggregative plans to unit plan we should derive the aggregative plan from economically viable and technically sound project plans, a view is also expressed that the national plan should be derived by aggregating village plans which must first be prepared

This immediately raises the methodological controversy as to whether planning should be from above or from below. In one view, planning has necessarily to be from the above since only a national assessment of resources and needs can provide for a consistent national plan. On the other hand, it may be argued that only a village plan can take note of the local needs and local resources. What is more, from the point of view of democratic planning i.e., the involvement of people, local planning has an advantage over the national plan, since they can evoke better participation of the local people in the formulation and implementation of the local plans.

However, planning from below has not proved practical anywhere. For, one, major projects would necessarily fall beyond the purview of the local planners and it is these major projects that can be an engine of change. It is these which can make a significant difference to the economic development of a country. Moreover, local planning tends to emphasise a mere enumeration of needs rather than of mobilisation of resources for the fulfilment of those needs. As a result, aggregation of local plans into a national plan may turn out to be a mere expression of aspirations without any possibility of fulfilment of such local plans. The exercise of aggregation may itself turn out to be futile.

While these are the disadvantages of planning from below, it is not as though planning from above would be without any problems. There is every likelihood that planning from above will fail to take note of the local resources and needs.

If planning from above is accepted, the methodology of disaggregation of a national plan into sub-national and local plans has to be evolved. One way of doing this would be to distinguish between national projects, regional projects and local projects. The regional plan would consist of the regional projects plus such of the national projects that fall within the region. Similarly, the local plans would consist

of the local projects plus such of the regional projects as fall within the local units. In formulation of the regional and local plans while the general size would be indicated by the higher planning authority, their details would be left to be decided by the regional and local authorities. The regional and local authorities would also have to take into account the spread effects of national investments or those complementary to the national projects.

The question of criteria

There is a question of the criteria for the classification of the activities which would fall in the central sector, the state sector and the local sector. The advocates of the principle of decentralisation would ask for the maximum number of projects being retained in the local sector, while the advocates of centralisation would like to reserve as many activities as possible for the central sector. Clear-cut economic criteria as to what must be centralised, and what must be decentralised and what may be centralised or decentralised cannot easily be laid down.

Where there is a written constitution, the constitutional division between the federal and constituent units is available for identification of national and regional sectors.

Even after a methodology is evolved for breaking the central plan into a set of local and regional plans, the question still remains of integrating plans from above with the plans from below. The plan from below must be based on an assessment of local resources and local needs. The plan from above would indicate a fraction of the national plan which is available for the locality and which is based on central appreciation of the local needs. Both these components have to be woven into an integrated and consistent local plan.

Local plans are not just divisions of the national plan into unit plans on an arithmetic basis. Each locality or region has its own potentialities and possibilities, its own resources and needs and the national plan has to take note of them both in the allocation of national resources and programmes and in their integration with the local needs and resources. This is possible only if adequate attention is paid to regional analysis. In recent years, significant developments have taken place in the techniques of regional analysis which have developed into a separate discipline called regional science.

It originated with the theory of location of the economist Alfred Weber, who identified factors which attract or repel industrial enterprises to or away from a location. He identified the process of agglomeration and degglomeration. Up to a certain point, as more and more activities are started at a place new activities find it advantageous to concentrate at the same location but beyond a certain point congestion and over-crowding makes the location less and less attractive thus setting a trend for the location of new activities away from the place. Built up from these concepts, Walter Isard and Christaller and

other writers have evolved further elaborate theories of spatial planning.

Spatial planning

Spatial planning is built round the concept of area development. The economic landscape develops according to certain natural or economic factors which lend homogeneity to a region. Thus, economists have identified metropolitan regions, river valley areas and industrial belts, geographical complexes, mining areas, catchment areas, flood control areas, etc. Certain homogeneous factors like water, soil types, transport network, etc., make such areas appropriate units for economic planning on a regional basis.

These areas may not necessarily be co-terminous with the administrative boundaries. River bases or soil types know no artificial boundaries. A new idea is, therefore, coming up that instead of preparing local plans for areas co-terminous with existing administrative boundaries, planning areas should be demarcated and regional plan prepared for such areas. Thus, Khrushchev introduced an innovation in the Russian planning system when he divided the country into 55 planning regions.

There are nodal points for such planning regions. These points are the radiating centres of economic impulses. Some time these are called growth points or central places.

Regional science studies indicate that there is not just one single nodal point or growth point. There is rather a hierarchy of such nodal points, growth points or central places. The lowest of the hierarchy of the growth points has certain villages or communities attached to it like a cluster. A cluster of subsidiary central places in turn form a constellation round a growth point of a higher category.

The regional plan or the local plan instead of talking of the targets of economic activities for the region as a whole should rather identify the economic activities with reference to the network of growth points and the area of influence of such growth points. Only this would provide locational dimension to planning and help in giving an operational reality to them.

An important objective of spatial planning is to avoid apoplexy at the centre and anemia at the periphery. The economic forces tend toward conglomeration of industry at urban centres while the interior areas continue to be deserted due to outward migration. Excessive conglomeration may lead to urban sprawls of such a degree of concentration of population as to go beyond the farthest limits of creating social facilities like housing, transport and water leading to evils like slums pavement dwelling, vagrancy, congestion in houses and drains and environmental pollution. W. Arthur Lewis has, therefore, rightly observed that a good development should contain measures to restrict further growth of cities with population in excess of 50000 and develop population centres in the range of 5,000 to 50,000. □

(Next issue : The distinct and local planning).

New registration procedure at employment exchanges

A NEW PROCEDURE for registration of candidates and for their referrals to employers, is being introduced at all the employment exchanges from July 1984. This will reduce the waiting period for fresh registrants and enable the employers to select more suitable candidates.

Under the simplified procedure, three different registration cards for different categories of applicants have been provided.

In the new referral policy, each employment exchange will prepare an annual list, in advance, of the candidates likely to be referred to prospective employers. From this list, candidates will be submitted only by seniority.

Under the procedure, a candidate who has been sponsored three times against Public Sector vacancies of regular/long term nature, will be kept dormant till such time as all other candidates having one year seniority, on the Live Register of the employment exchange, have been given three such chances.

At the end of 1983, the national employment service consisted of a net work of 726 employment exchanges. This network included 74 University Employment Information and Guidance Bureaux (UEI GBs) and 22 special employment exchanges for the physically handicapped.

India's space profile in the eighties

The Indian space programme is poised to hasten the transition from competence building and experimental missions to semi-operational and operational systems during 1985-90.

The main thrust in realising the major objectives of the approved 1980-90 space profile will be to achieve self-reliance in spacecraft and launch vehicles, complete inter-linkages between the launch vehicle, satellite applications, development and utilisation programmes, in addition to closing options for procured launchers.

The major missions targeted for 1985-90 include the launching of Augmented Satellite Launch Vehicle (ASLV) and Stretched Rohini Series Satellite (SROSS) in 1985, and of Indian Remote Sensing (IRS) satellite in 1986. The Polar Satellite Launch Vehicle (PSLV) is scheduled to be launched in 1988.

While the ASLV is designed to place 150 kg class satellites in low earth orbit, the PSLV is being designed to launch 1,000 kg class remote sensing spacecraft into polar sun-synchronous orbit.

As for the operational space services component envisaged in the Seventh Plan, the primary element is the INSAT system. The second component is the National Natural Resources Management systems of which the IRS series satellites will constitute the space segment.

The INSAT Programme has now entered the operational phase serving identified national requirements, such as long distance telecommunication, round the clock meteorological observation, data relay, disaster warning, and television broadcast.

As an active in-orbit back-up to INSAT 1B, another satellite, INSAT 1C, is being procured and is expected to be launched in 1986. The next satellite in the series, INSAT 1I, is scheduled to be launched in 1988-89.

August 15 ■ Special

Yojana

the dirty ones and their game

in the field

the referees

in the field

the referees

Politicians

vasant sathe
madhu dandavate

Bureaucrats

p.n. haksar
p.s. appu

Planners

malcolm s. adiseshiah
bunker roy

Educationists

p.m. bhargava
amrik singh

Professionals

v.r. krishna iyer
soli j. sorabjee

Preachers

k.a. abbas
debiprasad chattopadhyaya

Business men

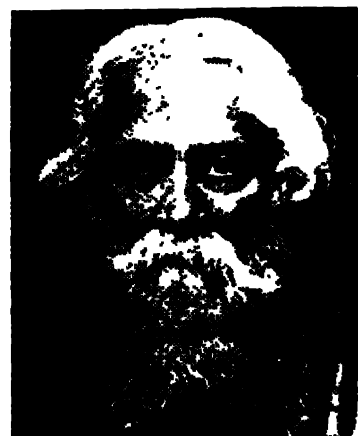
mohit sen
kamal nayan kabra

Journalists

khushwant singh
c.p. ramachandran

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Where the mind is without fear and the head held high;
Where knowledge is free;
Where the world has not been broken up into fragments by
narrow domestic walls;
Where words come out from the depths of truth;
Where tireless striving stretches its arm towards perfection;
Where the clear stream of reason has not lost its way into the
dreary desert sand of dead habit;
Where the mind is led forward by Thee into ever widening
thought and action
Into that heaven of freedom, my father, let my country awake !



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Why this issue ?

HOW come *Yojana*, a journal on planning, takes up issues not strictly falling in its ambit ! Yes, dear reader, if thinking goes this way, we do owe you an explanation- please bear with us just 2-3 minutes and you would be at it !

Believe us, it is not, *we repeat not*, out of any malice that we took up this exercise, "the dirty ones; and their game". Possibly, the theme as such does look rather unusual but surely not out of place!

As life goes, we have on the one hand the monster, called *the system*, to which we associate all that is bad in life, and on the other, the mute millions, longing for good, clean living. But, does this longing not look a mere pious wish ? Perhaps, yes, but a good one to live by.

Anyhow, who, you think, in society, play dirty game and make living difficult ? How come they carry on unchecked ? Can anyone dare disturb their game ? And, will at anytime men of goodwill succeed in dislodging them? These some pertinent questions, frankly speaking, we find very hard to answer. Why then an exercise in futility ?

So, to do or not to do was our problem. We did some hard thinking and decided at last to take the plunge. And, please, don't think we are that naive to claim any special skills to offer easy solution to difficult problems. But, what we can only claim to is an urge to grapple with problems. Our effort here has been to identify forces heading the system and gather

findings on their doings from some leading lights in the country.

But, how do people take this phenomenon ? Are they quite happy with the system as it works, or, they take it that any move for change is bound to be frustrated ? As life goes, apart from feeble voices we hear here and there, people at large seem to have learnt to live with it.

However, what troubles us is the goings on in the press, which we are told is the mouthpiece of the community. How and what it offers its reader ? Well, all that, as it thinks, meets the reader's interests ! And when circulation shows a rising curve where lies any risk in taking reader for a ride ! Why not then go ahead with the routine- *news*, coloured to the needs, *views*, as suit the interests, and *features* that sell most ! The by-word is *sell* and sell more and what boosts up sales is sensationalism. It is gossip, sex and scandal which the press believes are the reader's choice. Why, it thinks, bother for things serious- they tax reader's mind and he has no time and taste for them ! Believe it or not, all this neatly fits in in the system! The press, as it is, naturally likes playing the quick ones to back their team in the game !

It is in such vacuum, dear reader, that our mind, again and again, turns to the only agency which possibly can turn the tide. This is the Government-run media, with the farthest reach, and if it at all means business it cannot close its eyes to

the onslaught on decent living. But how do things move in Government ?

By the way, what exactly is Government made up of ? A dozen or two party politicians at the helm of affairs and a large horde of bureaucrats who rule the roost. And, what when the two join to work for common cause !

Be it as it may, what one cannot overlook is the danger the system poses to the country's unity. Our purpose here is not to go into all aspects of the menace but just to make our point. Speaking plainly, it is about the Government strategy to forge communal harmony and emotional integration. Shall we, dear reader, attempt here its summing up for you to ponder over !

All along, yes, right from August 15, 1947, our efforts have been to sell *teachings* of our *great* religions and use our *faithfuls* to project, what we call, *unity in diversity*. As things are, now let's be honest and confess that this so-called strategy has failed us miserably. Or else, how do we explain this continuing distrust among our communities ! The situation, frankly speaking, is grim and no better than it was on August 15, 1947. How and why so ?

The dilemma, dear reader, is that we live and go about in life only as Hindus, Muslims, Sikhs and Christians and not, *we repeat not*, as rational beings. We grow in the narrow confines of communities where going about in life is ordained. And, day in and day out, we are fed with the so-called virtues of such living. Our com-

munity leaders and preachers hammer into us the importance of maintaining *identity*. If such goes life, no wonder people, born and bred in the community, develop *natural* liking for the likes. And so, life moves on in the midst of mutual bickerings but the cat gets out of the bag the moment there develops some strain and stress. The truth is, all communities invariably act and react only to their *lights*.

The solution, yes, the right one, is that we take up, with all the zeal, enlightening of minds which truly perceive the growth of society- from the dark ages to the present when science and rationality has exploded many a myth. Yes, we need beginning teaching *not* as we do today, that the sacred book of Hindus is the *Bhagvad Gita*, the sacred book of Muslims is the *Quran*, the sacred book of Sikhs is the *Granth Saheb* and the sacred book of Christians is the *Bible*, but with the real rational stuff that develops reasoning in the child and also courage to question everything, yes, even these holy books. Living in the community cage just won't work.

In short, what we really need doing today is to liberate people from their community cages; expunge their pride and prejudices and make them learn living a full life with fellow-beings.

But will things change ? We hope they will and make living worth it !

CHIEF EDITOR

Politicians

We only enjoy power and bureaucrats rule !

Vasant Sathe

Slowly but surely, the quality of politicians has deteriorated, says Vasant Sathe, and we live today in a system where the politicians only enjoy power and all that goes with it, leaving actual governance and even formulation of policy to the bureaucrats. The system, he regrets, has grown with the active connivance of dirty politicians and the rampant corruption.

IF POLITICS IS THE SCIENCE of government as well as the art of governing, then the importance of the role of politicians can easily be understood. No community or section of human society affect the lives of a people as much as this body of social scientists-cum-artists as the politicians. In fact, their being efficient or otherwise depends largely on whether the dominant section among them consists more of social and political scientists or social and political artists. In fact, the best thing is the combination of the two elements in the politician. But if there has to be a choice it would be desirable to have a politician having temper and quality of a social and political scientist rather than that of a political artist knowing only the art of influencing people without a proper vision.

It is at once true that in a representative form of government where the people have a right to choose their representatives periodically, the politician needs

to have the ability of making friends and influencing people and convincing them. This, however, does not necessarily mean that he should be a good orator or stage performer. But it does mean that he should be close to the people and they should feel that they can entrust their well-being in the hands of this person in electing him as their representative.

Their role today !

Politicians have acquired an important role as a class or community, mainly in the context of modern democracies where the people get a right to choose their representatives to look after the governing of their society. This governing, in modern times, is not restricted only to law and order and defence, but touches and covers practically every field of activity in a given society. Hence the quality, capacity, character and role of politicians become even more relevant.

During Independence struggle, because there were less opportunities for sharing the loaves and fishes of political power except for those who sided with the colonial rulers, the freedom movement itself meant incurring the wrath of the rulers and suffering hardships. Even in a peaceful movement, there was always the risk of internment in jail and detention for longer periods. All this threw up a cadre and a class of politicians who were ready to face these hardships and who, as a part of movement under the leadership of Gandhiji—and even earlier during the period of Gokhale, Tilak, Lala Lajpatrai, Bipin Pal and others adopted a certain pattern and code of national discipline and personal behaviour. Their main capital was the example that they would set for their countrymen and the confidence that they would inspire in them in the struggle for independence. With Gandhiji coming on the scene, he brought in even a stricter code of personal life and discipline in the form of *khadi*, constructive work, etc.

However, as soon as we became independent, although in the earlier phase we had the leadership which had emerged from the discipline of the freedom movement and its culture, the same did not last long because the whole value system got conditioned by the economic system which, in effect, sanctified not only exploitation of one section by another but accumulation of gains made without consideration for the means in the hands of the few. Although in theory people everywhere, mainly those in authority and in the Press, kept on condemning and criticising corruption, the source of corruption, the growth of unaccounted money and its use, corruption in practice got sanctified and has virtually become a part of life. As Vinoba once observed "Slowly but surely, *Bhrastachar* itself became *Shrustachar*", meaning that corruption became the true code of life.

This black value system

It is here that like people coming out of the coal-mine accusing one another of having one's face and body blackened, there is no field of life where one can say that directly or indirectly it has not been affected by this phenomenon of black money and the black value system. The people who appear to be holiest are

"As soon as we became independent, although in the earlier phase we had the leadership which had emerged from the discipline of the freedom movement and its culture, the same did not last long because the whole value system got conditioned by the economic system which, in effect, sanctified not only exploitation of one section by another but accumulation of gains made without consideration for the means in the hands of the few".

those who criticise the most, particularly in the fourth estate. But even a superficial scrutiny will show that those who criticise most vehemently would not, if put to a test, be able to say that they do not partake in the flow or overflow of the unaccounted wealth.

And yet those who cash on the most—and I would submit rightly so—are the politicians, because they have taken upon themselves a role in which they are taking the responsibility for the welfare not only of their own, but mainly that of their fellow citizens. It is because of this claim and because they go to the people pleading with them to put the trust of their fate in the politician's hands, it becomes imperative that those politicians who desire to be leaders of men owe a duty for observing certain code of behaviour which would not betray the trust reposed in them. And this behaviour is not restricted only to outward manifestations, but more so to what they do to bring about a change in the living conditions of the impoverished majority of their fellow citizens who have put their faith in them.

And enjoying power !

Unfortunately, after the first euphoria in the post-Independence era, the politicians slowly sagged into a comfortable role of enjoying power, leaving the task of

actual administration and even formulation of policy, step by step, to the bureaucrats, believing that it is not necessary for them to have any direct hand in administration or implementation of policies. They thought that their role was restricted only to being the propagandist and pulpit preachers of the political platform. The result was that a whole system has developed in which it was felt day by day that it was not

"Although in theory people everywhere, mainly those in authority and in the Press, kept on condemning and criticising corruption, the source of corruption, the growth of unaccounted money and its use, corruption in practice got sanctified and has virtually become a part of life. As Vinoba once observed, "Slowly but surely, *Bhrastachar* itself became *Shrustachar*, meaning that corruption became the true code of life".

necessary to have any specialisation, expertise or knowledge for politicians to be the representatives of the people. That any one who could have a charismatic appeal and who could use the publicity technique of projecting a person could get elected and that was the end of it. Once elected, it was only a case of gathering the fruits of power to secure the wherewithal for the next election as well as the enjoyment that goes with the money power. This is how a crop of politicians, whose value system was reduced to the formula of somehow acquiring power, came into being.

This phenomenon is common to all political parties. It may differ in degrees according to availability of opportunities but the philosophical or value base is the same all over. The political parties whose cadre was fed on the slogans of socialist values very soon discovered that to fight an election they need funds and these funds do not come by circulating buckets and baskets, but come mainly from those who have amassed the unaccounted wealth and who are giving it with a hope that the beneficiaries will play their role when they become representatives.

Thus, the dirt and the dirty politicians are a phenomenon, which is the result of a system which we have

"After the first euphoria in the post-Independence era the politicians slowly sagged into a comfortable role of enjoying power leaving the task of actual administration and even formulation of policy, step by step, to the bureaucrats believing that it is not necessary for them to have any direct hand in administration or implementation of policies".

allowed to grow in spite of ourselves, nay, through our connivance and may be due to a willing acquiescence of some. As long as we do not have the earnest desire to change this system and structure and plug the source of the poisonous pollutant of corruption, it will only remain a cry in the wilderness, one accusing the other of being corrupt, chopping off a few heads to satisfy the conscience and to deceive ourselves and the people, but without any real impact on the way of life.□

Our dirty game is far more dangerous !

Madhu Dandavate

Decrying erosion of values leading to worst type of corruption and casteism, politics today, says the distinguished parliamentarian, is no more a science of change but has been reduced to the manipulative arithmetic of caste. The tensions among people, he adds, is the capital for electoral gains and the politician remains deeply involved in the dirty game of accentuating conflicts.

THERE IS DETERIORATION IN VARIOUS fields. However, what is of far reaching consequence is the denigration of our democratic institutions due to erosion of values. This has badly hit the politicians and the political institutions in the country.

In the famous book "God that failed", Ignazio Silone says....

"The distinction between theories and values is not sufficiently recognised, but it is fundamental. On a group of theories one can found a school, but on a group of values one can found a culture, a civilization, a new way of living together among men"

However, group of values to which Ignazio Silone has referred has suffered in politics. Corruption is not a new phenomenon. During the British regime in India too there was corruption. Even after independence the corruption was not eradicated. But our concern for values made the society consider corruption

as an aberration. Now there has been institutionalization of corruption and no stigma seems to be attached to such corruption. There is no burden on politicians' qualms of conscience. Those who lose majority in legislatures and have to relinquish power do not do it so easily and ungrudgingly. In their last ditch effort for survival they treat members of legislature as purchasable commodities to swing the balance of power. The political minority in a legislature is transformed into a majority overnight and with the dirty game succeeding they manage to keep themselves in the saddle of power. This filthy game in politics has resulted in the denigration of the very institution of Parliamentary democracy.

The communal violence

Recently there has been an unprecedented outburst of communal violence in places like Bhiwandi and Bombay in Maharashtra. Common man left to himself is peace-loving. He desires to live in amity with his

neighbours no matter to which religious and communal groups they belong. However some politicians who can build their positions only by capitalizing on communal strife rouse the communal passions of the people. It is difficult to awaken the people on injustice perpetrated against them in socio-economic fields. However, appealing to their baser communal instincts is comparatively an easier task. The short-sighted politician is at his dirty game. He remains in his ivory tower and through his pen and spoken words he pro-

"There is no burden on politicians' qualms of conscience. Those who lose majority in legislatures and have to relinquish power do not do it so easily and ungrudgingly. In their last ditch effort for survival they treat members of legislature as purchasable commodities to swing the balance of power".

vokes communal frenzy. Because of his populist approach he gains ascendance in his own community. But the result is communal disturbances in which only the poor among various communities get killed, only their petty belongings are destroyed, and the politician who fans all troubles merely watches the smouldering fires of the huts of the poor from a safe distance.

In some of the recent communal riots the dirtiest face of a politician backing vested interests has been revealed. At Bhiwandi some hutment dwellers were roasted alive along with their hutments which were set on fire. It is widely said that this was the conspiracy hatched by landlords and backed by politicians. They had a vested interest in getting the possession of the vacant land and so they chose to set the hutments on fire. When the authorities announced that the hutments gutted in the fire would be rebuilt to rehabilitate the survivors, the landlords went to the court of law to secure stay on the reconstruction of the demolished hutments. They were blessed by some politicians. Can there be a dirtier game?

The politician often talks in high sounding terms about the dignity and sanctity of the places of worship. The strange paradox is that the very politicians who stoutly uphold the dignity of the place of worship contributes to converting the place of worship into an arsenal of ammunition and arms and abode of criminals and terrorists.

These acts constitute the desecration of the place of worship. This again is a dirty game of the politician. Unfortunately the victims of this game are the common folk.

A divisive force !

There was a time when the mainstream of Indian politics was an integrating force in the country. Today politics is fast becoming a divisive force. Lured by the prospects of electoral victory, politician is encouraging caste-ridden politics. Politics has become a game of the caste-ridden backward states. It has ceased to be a science of change but has been reduced to the manipulative arithmetic of caste. The tensions between these castes is the capital for electoral gains and so the politician remains deeply involved in the dirty game of accentuating caste conflicts with an eye on elections.

Only in times of national crisis like aggression or struggle against authoritarianism the fissiparous tendencies meticulously nurtured by politicians recede to the background only to surface again when the crisis is over.

Whether it is the politician engineering defections, institutionalising corruption or capitalising on communal and caste tensions or whether it is a trader

"Some politicians who can build their positions only by capitalizing on communal strife rouse the communal passions of the people. It is difficult to awaken the people on injustice perpetrated against them in socio-economic fields. However, appealing to their baser communal instincts is comparatively an easier task".

backed by politician or a bureaucrat indulging in adulteration, it is the serious erosion of values that has made politicians' dirty game possible.

Only through the fire of struggle and sacrifices for a cleaner public life or in a long-drawn education process of cultivating character and nourishing ennobling values that this dirty game in politics can be defeated. The path is an arduous one. But it has to be trod in the interest of cleansing our public life and politics.

"Whether it is the politician engineering defections, institutionalising corruption or capitalising on communal and caste tensions or whether it is a trader backed by politician or a bureaucrat indulging in adulteration, it is the serious erosion of values that has made politicians' dirty game possible."

Bureaucrats

The pot and the kettle !

P. N. Haksar

YOJANA put to Shri P. N. Haksar the following questions .

1. The YOJANA coverage in its thematic Special, "the dirty ones ; and their game", includes bureaucracy as well How do you look at the teaming-up ?
2. What, in your opinion, has led to slide-down in the working of the bureaucracy ?
3. How do you look at the concept of committed bureaucracy ? Is the present bureaucracy capable of delivering the goods ?
4. How do you look at the grievances of the technocrats vis-a-vis the bureaucrats ?

We publish below Shri Haksar's response

(Chief Editor)

THE WAY YOU HAVE STRUCTURED YOUR questions, it is rather difficult to answer them truthfully. It is extremely difficult in our country to explain the concept called "system". It is equally difficult to build and maintain institutions in our country. We, as a people, only understand individuals and, at a higher level, we are overwhelmingly concerned with self and its salvation. It is this pre-occupation which is destructive of, what I might call, a "systemic" approach and of respect for institutions.

While our academics talk about holistic approach, in actual practice we just do not actually see the interpenetrating historical, social, cultural, political and economic processes. The result is there for everyone to see. Institutions decay. We have disonances, we have incoherence, we fall apart even while seminars are being held and speeches are being made for promoting national integration

Bureaucracy is not an isolated phenomenon. It is a part of our state system. If one could compare the State to a ship, the political leadership will be found in the control of the Bridge of the ship constituting itself as a collective Captain of the ship. The bureaucracy would be the Engine room. Both of them have to work together to make the ship move in a particular direction. The direction is set by the political leadership. The analogy of the ship is far too simple because the direction of its movement, its destination or destinations, are known. But when one has to provide leadership to vast processes of historical, political, social, economic, cultural, educational, scientific, technological transformation, things get extremely complicated. And they are indefinitely more complicated in India where we are, for the first time, concerned with creating modern industry, modern agriculture, modern science and technology and a state system which cannot be described as Mughal or Gupta or Vijayanagar or Chola or Chera—all based on the system of Kingship and dynasty.

The State is controlled by government and the government in its turn, is controlled by a political party and its leadership.

Reverting to the analogy of ship and State, you can just imagine what will happen to a ship in motion if the Captain and the crew do not inspire confidence in another. The inspiring of confidence, gaining of mutual trust, is perhaps the most crucial and critical element in the running of any State system, more specially, if it is done through a political process called democracy. Even if the State system is created by a political process called revolution, as in France in the 18th Century or in the Czarist Russia and China in the 20th Century, a bureaucratic system becomes an inescapable necessity for the maintenance of the State system.

The System, both its political part and its bureaucratic part, functions within an environment of values and the question which arises is : whose responsibility it is to create, sustain and uphold the value system. According to our ancient wisdom, it is said: *Yatha Raja Tatha Praja*, which means that *Raja* (the King) has to set the standards for the *Praja* (subjects) to be inspired and to respond.

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If you believe in God and in the stories of creation, then in all the religious books, you will find that God created everything—ocean, skies, the Sun, the Earth, the Moon, Stars and even us, human beings. God being all powerful, could have said that having created the system, He will make it run according to His moods and fancy. But the God being, by definition, wise and all knowing, realised that such a whimsical way of running the creation and its creatures, would create chaos rather than cosmos. So he set about organising the bits and pieces of His creation within a system. Thus, we have a Solar system and the all powerful God framed rules and regulations for the governing of the system and though millions and millions of years have passed the Earth moves around its axis, it travels around the Sun; the Moon has its regulated movement and so on.

Our politicians, even when they pretend to be believers of God are blinded by the arrogance of power and by the search for power. They believe that they do not have to observe the rules and regulations, maintain any standards or norms of the State system both in its political and bureaucratic aspect; nor do they seem to be concerned by consistently upholding the value norms without which no political cosmos can hold together.

According to our ancient wisdom, the *Sarkar* (Government or State) acquires legitimacy and res-

pect among the wide masses of people only in the measure it sets high standards which are implicit in the word *Iqbal* and by providing means and mechanisms by which the grievances, the dis-satisfaction and tensions of the Society have the opportunity to express in an orderly manner which is called *Soonwani*.

If there is any truth in all that I have said, then I would say that the disintegration of our bureaucracy, its lapses, both moral and in terms of perform-

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ance of their duty, are a reflection of all too palpable decay of our political system, political leadership and of the value system which ought to underpin the political processes and the politicians. The result is that honesty, integrity, commitment to performing one's duty are visibly decaying.

In an environment, where the art and science of getting on in life, be it political life, bureaucratic life, life of industry and commerce, consists of circumventing laws, regulations, code of ethics and value system, it is not surprising that bureaucrats contribute their own distinctive quota to the playing of the dirty games. And, indeed, one has to admit that the games are getting dirtier and dirtier.

In ancient times, there was a *noblesse oblige* binding the landlord to the tenant, to the share cropper. There was similar *noblesse oblige* between our great

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leaders and the masses who turned towards them in hope and reverence. This is no longer obtaining. The *noblesse oblige* is now sustained by money nexus. I should not be misunderstood. The old order had to be changed. But it does not follow that in the course of structuring new order, one could have so recklessly cast away the value system appropriate to the processes of change, be they described as industrialisation, modernisation, secularisation etc.

You might ask : is then everything lost irrevocably? My answer is 'no', provided we make a firm resolve to run our State system in accordance with

prescribed rules and regulations and without violating norms of objective evaluation of persons and their performance. Appointment, probation, promotion, transfer, punishment and reward must not only be just and objective, but should appear at all times, to be just and objective. We must remember that punishment is just when the society as a whole regards it as just. But if we have a situation where punishment is discriminatory and evaluation of an

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officer departs from the standard of objectivity and is heavily coloured by personal preferences of politicians, we cannot have a functioning bureaucratic system. We shall break it as we have done. In such circumstances, the cleverest among the bureaucrats would appear to be "loyal" but become venal. It would be equally necessary to lay down clearcut policies so that the decision-making process is not fractured by influences operating outside the policy frame. However, most important thing is to generate an atmosphere and to sustain it—an atmosphere that politicians and bureaucrats are partners in building India of our dreams. History has recorded that when a nation loses a vision, civilizations and societies have perished.

About commitment

Finally, about commitment. There is no one in India who is not committed. We are all committed to one thing or another. Regrettably, this commitment is to oneself, to one's own family, to one's community, religion, caste, region etc. We cannot build an integrated national entity of India on the basis of these commitments. We must have commitments to excellence, objectivity in our appraisal system,

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commitment to integrity and a commitment to the welfare and well being of our people and of our country. Such a commitment must be seen to be observed and translated into deeds by everyone concerned—politicians, bureaucrats, those working in the area of commerce, trade and industry, educationists, mediamen, writers and artists.

I must add a word about the quality of our people entering into our bureaucratic system. I have intimate knowledge of men and women in the various

branches of our bureaucracy. Their quality is as good as anyone would wish it to be. But their training is ritualistic and mostly irrelevant. And after a few years in service, the idealism with which they join, becomes heavily eroded. It is tragic to see so much of human waste. This wastage is visible even in our scientific community.

Believing as I do that not everything is lost and that given a political will, things can be set right, I devoutly hope that my diagnosis would be accepted. The necessary pre-condition for the healing process is the correctness of diagnosis. And my diagnosis is based on my long experience and detailed observation of how we have, either out of lack of understanding or working on false assumptions, allowed our State system and our institutions to develop within them serious stresses, strains, tensions and cracks.

Bureaucrats vis-a-vis technocrats

As to the last question about the bureaucrats and technocrats, the controversy is misconceived. In my view, technocrats should be as well paid, if not better, as bureaucrats. I also believe that bureaucrats should not be involved in the management and the decision-making processes of our public sector enterprises, I

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would go even further to state that the management of our public sector enterprises must be freed from the dominance and interference of the ministries and civil servants. If this is done, the basic cause of competition between bureaucrats and technocrats would be abolished. And it is high time that it was abolished.

I shall be failing in my duty, which I owe to myself, if I did not point out the ominous implications of the near collapse of the entire administrative structure of Punjab under the impact of the crisis in that State. And if truth be told, the state of administrative structure—Police, Bureaucracy, Intelligence etc.—in the State of Bihar is, if anything, worse. The riots in Bhiwandi has shown that the local police and the administration could not cope with it and thus the Army had to be called in in aid of the civil power. From my own personal knowledge I know that the administration in U.P. and other States in India is no better. The crisis in Punjab which laid bare the anatomy of the decay ought to be seen as an opportunity to sit up, to think and to take serious remedial measures. As the old Sanskrit proverb says that it is no wise to start digging the well when the fire has already started. (*Na Koop Khannam Yuktam Pradipte Vihina Grihe*). □

They are surely one-up in the game !

P. S. Appu

Blaming bureaucracy for most of the present-day mess-up, Appu questions its integrity and professional competence to help solve problems facing the country. The rampant corruption and the growing deterioration in implementation of plan projects, he argues, is largely due to the fact that civil servants including most at the top level are more dirty than their political masters.

DOWN THE AGES, all people, especially those getting on in years, have shown a tendency to talk disparagingly of the present, and indulge in lavish praise of the 'glories' of the past. This inclination is even more pronounced in a conspicuously conservative group like retired bureaucrats. That being so, despite conscious efforts, to be fair and objective, it is quite possible that my assessment of the goings on in the bureaucracy may turn out to be rather severe. But then, history tells us that societies have experienced ages of marked decline and decay when things do get really worse. We are, without doubt, living in such a period of decline. All our institutions are in decay. The values of yesterday have crumbled. The state structure is getting increasingly dysfunctional. There is a pervasive feeling of helplessness, frustration and gloom. In such a situation there is nothing surprising if the bureaucracy too is in a bad shape.

The democratic set-up contemplates different political parties wielding power at different times. Ministers

who hold office for short periods often lack the necessary experience and expertise. Hence, a professionally competent and politically neutral civil service is a *sine qua non* for the smooth and efficient functioning of a democratic government. The founding fathers of the Indian Constitution were acutely conscious of the supreme need for such a civil service. That awareness found expression in the pivotal role assigned to the Public Service Commission in matters relating to the recruitment and service conditions of civil servants and the guarantees under Article 311 of the Constitution. In no other major democratic country do civil servants enjoy as much legal protection as in India. It is, of course, quite another matter that despite all the iron-clad guarantees, our bureaucracy has failed to live up to the expectations of the founders of the Constitution. A broad assessment of the performance of the Indian bureaucracy in the post-independence era is that the level of its professional competence has been low, that its higher echelons lack in political neutrality, and, that at all levels it is plagued by rampant corruption.

Low level of Professional competence

A high degree of professionalism is, at any rate ought to be, the dominant characteristic of a modern bureaucracy. The fatal failing of the Indian bureaucracy today is its low level of professional competence. The lack of professionalism is reflected in the growing reluctance of senior civil servants to give frank and fearless advice, the inept handling of the major problems that bedevil the nation, inability to innovate and come up with imaginative solutions to the difficult questions that confront us, failure to keep abreast of modern developments and acquire new skills, slipshod approach to the preparation and implementation of projects, lack of cost-consciousness, dilatoriness, extreme reluctance to take decisions, and above all the unpardonable neglect of routine administration. It will not be possible to dwell upon all these failings in the course of a brief article. I shall just touch upon a few of them.

Though in a parliamentary democracy it is undoubtedly the prerogative of the minister, and in important cases of the council of ministers, to take final decision, the higher civil service plays a crucial role in the formulation of policy. In a few cases the minister may have a broad idea of the policy to be adopted. But very often he may not have applied his mind to the question, though he may not be lacking in prejudices and pre-conceived notions. And more often than not, particularly at the State level, ministers have little interest in policy matters. In all cases it is the clear duty of the civil servants to examine

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thoroughly the pros and cons of the proposal and fearlessly express their views. Three decades ago a substantial percentage of the civil servants conformed to this ideal. But today the bulk of the senior civil servants behave like courtiers, ever on the look out to please the ministers and their cohorts. This is to be greatly deplored because with the sharp decline in the calibre of the politicians in office there is much greater need today than ever in the past of frank and wholesome advice being tendered to the ministers.

Bureaucracy to blame for poor performance

Another important area where the performance of the bureaucracy has been manifestly poor is that of formulation and implementation of development programmes and projects. Schemes are often drawn up at the national level, particularly in sectors like Agriculture, Rural Development and Social Services without much thought being given to their feasibility,

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intrinsic worth, social relevance or suitability for particular areas. Very often these national programmes are modified or abandoned at the slightest provocation resulting in a great deal of uncertainty and confusion. And, at the state level projects are often formulated in great haste, almost mechanically, with little attention being paid to the relevant technical, financial and economic aspects. Mind-boggling and protracted scrutiny by the Finance and Planning Departments leads to a great deal of delay but no great improvement in the content of the projects. Strangely enough, once sanction is accorded all the hurry shown at the stage of formulation disappears.

In respect of all projects, whether of the Centre or the States, all round inefficiency at the stage of implementation invariably leads to unconscionable delay in completion, poor quality of work and phenomenal escalation of cost. It is one of the ironies of Indian economic planning that while the techniques of planning at the national level have become more and more sophisticated over the years, there has been a marked deterioration in the quality of implementation. A large portion of the blame for this must rest on the shoulders of the bureaucracy.

A notable weakness of the Indian bureaucracy is its failure to familiarise itself with modern management techniques, acquire new skills, and tune up its professional efficiency. An equally unwelcome feature of the higher civil service is the lack of cost-consciousness. Rare, indeed, is the senior officer who is aware of the crucial significance of the compound rate of interest and realizes that money today and money two years hence are very different things. The typical bureaucrat's lack of cost-consciousness is partly responsible for his well-known tendency to avoid decision making. A large number of top civil servants rue the day they are obliged to take a decision. When it becomes no longer possible to postpone a decision, they invariably try to minimise the im-

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gined risk by roping in a number of their colleagues into the decision making process.

The gravest failure

The gravest charge against the bureaucracy is that it has miserably failed even in discharging its age-old regulatory functions. Law and order has broken down in large parts of the country, particularly in the Gangetic Valley. People no longer enjoy security of life and property in these areas. The police, whose primary duty it is to protect life and property, has become an instrument of oppression. The administrative machinery has come to a grinding halt in some areas, and in a few places, it is on the verge of collapse. Any casual visitor to a Government office will see that routine is thoroughly neglected. A stage has been reached when no citizen can get anything done without greasing the palms of myriad functionaries or bringing to bear considerable influence on the officer concerned. The state of the postal and telephone systems and the railways shows that the organisations under the Central Government have also been afflicted by the same malady. The elementary functions of Government are not discharged with even a modicum of efficiency and honesty. And the primary responsibility for that must rest with the bureaucracy. □

Though, by and large, the bureaucracy continues to be politically non-aligned, a large number of senior civil servants have identified themselves with particular political groups of individual leaders. There have even been cases where they actively helped their patrons during elections. And, of course, all over the country, and at all levels, the bureaucracy has failed to maintain the high standard of objectivity and impartiality expected of it. Few civil servants strive hard to uphold the rule of law or act in accordance with the dictates of their conscience. At the slightest of hints from their political masters, the great majority of civil servants are only too willing to violate any law or rule or well accepted principles.

The corrupt top bureaucrats

There was no time when the bureaucracy was entirely free from corruption. But some thirty years ago there were only very few corrupt men in the higher civil services. The great majority of them maintained high standards of probity, lived within their means

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and had a holy horror of misusing government property. During the last ten or fifteen years things have changed beyond recognition. Nowadays a large number of bureaucrats accept illegal gratification and a much larger number indulge in peccadillos. The misuse of government transport has become almost universal. The norms have changed to such an extent that today the small minority of civil servants who maintain impeccable standards of integrity, live within their income and attend office driving their own cars are looked upon as pigs or plain fools. Corruption seems to have become as endemic as in the early days of the East India company.

After a brief survey of the scene one comes to the inescapable conclusion that the bureaucracy in India has failed to live up to the level of professional efficiency, political neutrality and integrity expected of the permanent services of a great democracy. A package of perverse personnel policies pursued with cynical non-chalance during the last few years has resulted in the weakening and demoralization of the bureaucracy, particularly of its higher echelons. Today in the higher civil service preferment is seldom related to performance. Fawning sycophants, often lacking in ability and integrity, but, of course, gifted with a plastic conscience and a malleable backbone, get appointed to key posts. Sometimes able, upright and dedicated public servants are deliberately kept out of such positions, occasionally, upright men are even harassed by frequent transfers and other devices. The demoralization that has set in as a result of these

developments is so colossal that today the civil service has ceased to be an adequate instrument for implementing government policies or even for conducting routine administration. The public image of the Indian bureaucracy as a thoroughly demoralised, spineless, inefficient, dilatory and corrupt body is by no means unfair or overdrawn.

Where bureaucrats excel !

Most civil servants would say that they are blameless and that the 'dirty' politicians are responsible

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for the sorry state of affairs. This is really a case of the pot calling the kettle black. The Indian politicians must, of course, be held guilty on several counts, but, it is manifestly untan and unreasonable to blame them exclusively, or even primarily, for the sharp decline of the bureaucracy. The major share of the guilt must be laid at the doors of the civil servants themselves. The unpleasant truth is that in most cases the civil servants have been active collaborators, and not just silent spectators or reluctant accomplices in ruining the civil service.

I have said many unpleasant things about the Indian bureaucracy. I should, however, hasten to add that the bureaucracy is not an autonomous institution. It is an integral part of the polity, and bureaucrats constitute a representative cross-section of the society. When the polity is in decline and the society in disarray, as in India today, it is inevitable that the bureaucracy too should be in a bad shape. Hence efforts

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towards reforming the bureaucracy will be of no avail until the grave maladies in the body politic are set right. The first step in that direction should be conscious, well-concerted efforts to develop accountability in our policies. Once the polity regains its health it should not be difficult to set the bureaucracy right. After all, even today it has in its ranks some people of outstanding ability and integrity. And every year some very gifted young men and women of the new generation join its ranks. By following the right personnel policies and restoring its morale, it should be possible to forge the bureaucracy as a suitable instrument for the task ahead.

Yes, the planners too play their dirty part !

Malcolm S. Adiseshiah

In his candid critique, the noted planner narrates the game planners indulge in, firstly, working out "the growth rate" in the plan period ; secondly, inventing the plan area called "the core sector" ; and thirdly, in the "poverty amelioration" sector deliberately not making clear what this quantitative objective would involve in actual redistributive measure in society with a sustained improvement in the income earned by the poor person.

IT IS RATHER IMPORTANT, to start with, to define our terms because of the ambiguous connotation of the major term, 'the Dirty Ones'. Dirt and Dirty connote a state of personal uncleanness and the normal use of the term relates to a person being unclean through accumulation of insanitary and unhygienic matter on his person. I regard this connotation as ambiguous because the term dirt and dirty in this note (which applies to planners) is used primarily in relation to one's social actions or inactions which result in either not helping society attain its agreed goals; or contributing to the distortion and defeat of those goals, rather than accumulating personal illgotten wealth.

The dirt, its three facets

The dirt here is the use of means which do not help attain agreed social objectives or employ means which defeat and distort these objectives. For instance, we have declared ourselves to be a socialist democratic society, and we remain content with the social *status quo* or plan and operate an inegalitarian, possibly an increasingly inegalitarian, society ; we deny democracy by planning the development of society from a central point and not bothering about what people in each locality want or feel they can accomplish. Thus the dirt in the term dirty ones has primarily social and not individual overtones—what one does or does not do about other peoples' well-being, or what one does to reduce their living levels, and only secondarily has it a possible personal dimension, as reflected in some unmerited or unearned personal gain.

Another facet of the dirt of these dirty ones is that these social or anti-social life and actions of theirs have a self-perpetuating and a self-accumulating nature. Once a social or anti-social action has been set in motion, it increases and gathers momentum on its own, without any further guidance from the author. Faced with massive poverty, if the means employed to counter it is limited to some forms of alleviating relief with a number of leakages which are sprung on the way to the beneficiary, then the relief programmes will continue from year to year, and from plan to plan because it harms no one, does not in fact bring one person to rise above poverty and it lives on its own justifying rhetoric. Similarly once a permit or a license which was originally devised as a control device to ensure that the country's scarce capital resources flow into the wage goods sector as one social priority, but is in actual fact allowed to help establish some luxury

goods production (for which there is a growing market because resources are concentrated in the hands of the rich consumers.), then the further issue of licenses for similar inessential goods/services production becomes a self-regulatory and self-accumulative process.

And the fraternity !

A third feature of the dirt which is perpetuated and accumulates in the dirty ones is that the dirty ones tend to form an unspoken or explicit brotherhood to defend their dirt and ensure its perpetuation and accumulation against those who would like to clean the dirt and prevent its reaccumulation. This fraternity of the dirty ones is not always a conscious and outwardly bound brotherhood : rather, members of the fraternity are able to recognise each other by the accumulated dirt. In fact the more that dirt, in the

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form of distorting or defeating social objectives, is accumulated, the higher is the status of that dirty one in the hierarchy of dirt. The fraternity itself is formed by and recognised as those who have the dirt and have accumulated it or are accumulating it in various degrees. The fraternity is also most often unconsciously joined together in many ways in defence of their dirt and is opposed to those who have no dirt on them. Here there is the curious fact that the clean ones are the mass of the people who are poor and who are clean, not because they are opposed to dirt (as the means of defeating social objectives as defined earlier) but because they do not have the chance of becoming dirty. And it is to resist the swelling of their ranks, and thus devaluing their status, that there is expressed the solidarity of the dirt of the dirty ones.

The planner is a technician—usually an economist, a statistician or one who acquires or has acquired these specialisations. He is thus basically and by profession a dirty one because he takes as given the social goals and their defeat or distortion, and works out the means, methods, and modalities of attainment of these given purposes and goals. I should add that as a planner myself, I am also talking about myself as a 'dirty one'. To expand on this dirty game of the planner, I take three brief case studies.

The 3 case studies

ONE

The growth rate !

Let us take the growth rate of the economy on which the attainment of most other social objectives depend. The planner is asked to work out the highest possible rate that should be adopted in the plan period. He then works out a rate of 4.7 per cent per

annum as the feasible rate but on finding that the base year recorded a—5.2 per cent negative growth, recommends a rate of 5.2 per cent per annum for the five years, without making it clear that the additional 0.5 per cent growth per year represents a recovery to the *status quo ante*, before the year when the negative rate is recorded. He personally explains to the other dirty ones who run the country that this higher rate is based on the negative growth rate of the base year, but both because of the technicity of the explanation and because it is easier to mislead the public, the higher rate is presented as a real development of the economy. This planning exercise and explanation has again been repeated this year against last year's low growth rate of 2 per cent. Thus the planner is (possibly an unconscious and/or unwilling) partner in the dirty game of misleading the people of what the real growth rate for the year or for the first four years of the plan is.

TWO

The core sector

The planner has invented an area of the Five Year Plan called the core sector and has built a high walled fence around it to see that whatever the rate of inflation during this time period, the real resources going into this sector are maintained at the level at which they were originally conceived. Now what is this core sector that the planner has invented ? One would have thought that following the 10 objectives of the plan, reiterated in the revised 20-point programme, they would cluster around the areas most directly affecting the well-being or ill-being of the people and of society. Such as the health care and nutrition of the people, particularly the vulnerable sections such as the pre-school child and the lactating mother, primary education and adult literacy learning which can enable the child to grow into a thinking and working adult and increase the earnings of the illiterate adult who all belong to the poverty sector, safe drinking water particularly in our 3.8 lakh problem villages which are the cause of the major communicable disease—water borne illness, and rural housing and house sites for the landless. These are the

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serialised items which constitute the Minimum Needs Programme and it is those items which ought to constitute the core sector to the planner whose task is to suggest techniques and programmes that help society attain the agreed plan objectives.

However what the planner calls the core sector comprises electricity, coal, railways, steel, crude and petroleum products, and it is investments in these five or six areas which are safeguarded. They are of course important for the development of industry and agri-

culture of the country, but do not directly relate to human well-being as do the first group of items enumerated. In safeguarding the investment of the core sector as defined by the planner, which has meant increasing the resources that flow into this sector in absolute terms, as has been done in the current plan to the extent of some 20 per cent (in money terms) over what was originally set forth, it has also meant diverting from the real core sector of health care, nutrition, education, provision of drinking water etc. resources to augment the resources of the planner's core sector.

This topsy turvy view !

An analysis of this diversion shows that some 15 per cent of the resources have been taken out from what I have called the real core sector, the human and social well being areas, to what the planner has called the core sector. One rather sorry example of this topsy turvy view of what constitutes the core sector of a society's development was the resistance of the planner to a scheme launched by one of our states to provide all children up to the age 10 at least one nutritious meal at noon every day. This really meant that the children of the poor majority of the state numbering some 52 lakhs were assured of one solid meal. The planners, including myself as a planner, were opposed to this scheme on the ground that the state could not afford the scheme (it cost Rs. 100-120 crores per annum), and because it was diverting resources from the core sector in the state—namely, electricity and power.

And excepting for myself today, all my planner friends are still opposed to the scheme. I have now come to the conclusion that this scheme is at the core of what I call the core sector, because in a situation where poverty will not be eradicated for a long, long time, this scheme of feeding the children of the poor is (a) manageable as against feeding all the poor (who will number five times the 52 lakh poor children), (b) limited in terms of cost as it is less than 3 per cent of the state's annual budget, and (c) is a

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real investment in the future human development of the state. I am now convinced that this will become part of the Prime Minister's 20-point programme in the VII or VIII Plan, a real relief bulwark against the nation's poverty. But the opposition to it and the low priority given to the human and social development programmes is a reflection of the planner's blind eye to the dirt that is accumulating around him in his not realising that he is frustrating the attainment of the agreed human and social objectives of the plan and of society.

THREE

Poverty amelioration

One of the major important objectives of the Plan is the reduction of the poverty in the country. In fact the planners were asked to quantify the effort and on their advice, we have stated that in the five years of the Sixth Plan we will bring 100 million of the 330 million people living in poverty above the poverty line. The dirt in this matter was in not making clear what this quantitative objective would involve in actual redistributive measures in society, with a sustained improvement in the income earned by the

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poor person. Whether it be through land or some other form of asset ownership which the land ceiling and distribution programme, or potentially the integrated rural development programme, or the more recently launched self-employment of the educated unemployed scheme, or DPAP and SIDA involve

The further dirt in this important objective is in (a) not making clear that schemes like NREP, RIEGP and the women's and tribal sub-plans do not provide for a sustained effort by the benefited person who is given some temporary employment which will not bring him above the poverty line on a permanent basis, and (b) the many loopholes and leakages that have been built even into the programmes like land ceiling and land distribution or IRDP, which do have the element of such sustained benefits, but where the leakages defeat the objective of lifting the person above the poverty line.

The final *denouement* is when the planner is asked by the political authority to estimate how many of the 100 millions targeted to be brought above the poverty line in five years are actually so lifted above the poverty by the end of the first 2 years when the plan is being appraised, and by using some rather questionable methodology estimates that 57 millions have been raised above the poverty line. The methodology used involves an unreal assumption that the rate of increase of the incomes of the poor majority of society was the same as that of the rich minority, when all empirical studies have shown that in a period of inflation—in the first year, 1980-81, the inflation rate was 17.1 per cent, and in the second year, 1981-82, it was 18.2 per cent, totalling 35.3 per cent for the first two years), the rate of increase of the incomes of the well-to-do is about two to three times the rate of incomes increase of the poor. The methodology also

assumes that the poor benefited from the general agricultural and rural industrial development programmes, which might be true, but which is not based on field surveys and is more in the nature of a hunch. Thus in the third typical case of poverty amelioration, the planner is made to play a 'dirty game' in (a) ignoring the real limitation of the temporary relief programmes as well as the loopholes and leaks built into programmes which can relieve poverty, and (b) inventing and

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improvising methodology which gives the public unprovable (and probably false) information of the extent to which one of society's basic goals—poverty amelioration—is being attained.

The way out is !

What then should the planner do to get out of being one of the 'dirty ones' playing 'a dirty game'.

One initial—and almost insuperable obstacle—that he faces in this regard is that the planner cannot himself stop being a 'dirty one' in a society where his peers and his superiors are all 'dirty ones'. Just as you cannot have a square metre of cleanliness in a surrounding square kilometre of filth, no purpose—except that of a peer and prophet—is served by the planner dissociating himself (except occasionally as an action of last resort, as I will point out at the end) from the surrounding society of 'dirt' in order to maintain himself in an isolated state of 'cleanliness' and 'purity'. In a society dominated by 'the dirty ones', the planner will also be dirty. This is the mark of his being in society, serving society, and carrying out the orders of these elected to govern society.

"The planner, more than other members of his social peer group, being conscious about the extent to which the social objectives are being defeated by various legal loopholes and legislative and executive leakages, should from time to time come out into open and expose and make public the 'dirt' surrounding the economic endeavour and distorting social objectives."

ONE

And so the first thing that I would advise is for the planner to realise that he is 'a dirty one', that he is being forced into playing a dirty game. This consciousness of his limitation is important, because his technicality and his technical virtuosity tend to make him complacent with his tools and his working methods, and somewhat arrogant about the models and conclusions that he constructs and derives from them. For instance, from one set of tools, one group of planners

derive the conclusion that 52 million people have been lifted above the poverty line. From another set of tools another planner draws the conclusion that only 7.5 million have been raised above the poverty line. Both groups are functioning through a social structure which denies the poverty eradication objective, and to that extent both should be conscious about the dirt surrounding them, and be humble and sceptical about both their tools and distorting and distorted effects they give rise to.

TWO

Second, the planner, more than other members of his social peer group, being conscious about the extent to which the social objectives are being defeated by various legal loopholes and legislative and executive leakages, should from time to time come out into open and expose and make public the 'dirt' surrounding the economic endeavour and distorting social objectives. The planner as an economist is used to making clear the unreal nature of his assumption, such as that other things which are assumed to be given are not given, or that in the long run when certain results are expected to be produced we must also take into effect the fact that in the long run we will all be dead. So too

"The planner is asked to work out the highest possible rate that should be adopted in the plan period. He then works out a rate of 4.7 per cent per annum as the feasible rate but on finding that the base year recorded a —5.2 per cent negative growth, recommends a rate of 5.2 per cent per annum for the five years, without making it clear that the additional 0.5 per cent growth per year represents a recovery to the status quo ante, before the year when the negative rate is recorded."

he must on occasions and on important social and economic issues tell the truth as he sees it, about the dirt and dust enveloping certain economic factors and results, which are being publicised by the political authority.

AND THREE

Finally, there may be occasions when the planner must dissociate himself from the planning process in order not to be drowned in a sea of dirt and corruption. This would be rare, and hopefully, a one time affair. But the planner's training in digging at the facts and pursuing his analysis till he arrives at what he believes to be truth when set against the implicit and explicit defeat of people's wishes and society's most cherished goal may lead him to withdraw from the direct game of the 'dirty ones'. His consequent social apartness and economic silence is rather a heavy price that he may be called upon to pay. But there may be occasions when his very calling as a planner devoted to facing the stark facts of truth force him into such a position of withdrawal and passivity. When that happens, he is also making his contribution to reducing 'the dirt' and wiping 'the dust' off people and society, which should be his sole guiding star. □

Planners

With self-made rules their game goes well!

Bunker Roy

Says the author, "Too much of intellect and virtually no manual labour has made our planner what he is—impractical but at the same time supremely confident that he is right. He has Western logic to back him and Indian hierarchy to protect him. If the project is successful he gets the credit : if it is a disaster the lower government functionaries are blamed."

BY AND LARGE in a country where the percentage of illiteracy is so high the written word is treated with respect. In a country where excellence, capability and competence is generally judged by the number of degrees you hold there is little doubt the planner is on a very safe wicket. In this game of playing with figures the rules are framed by the planner. He takes many things for granted. If the system, as it is today, has to work and produce results of the intangible kind what needs to be taken for granted, first, is the need to keep a distance so that there are enough barriers to keep you away from reality. It is taken for granted that the planner need not have practical experience : it is enough to sympathise and make up the rest with imagination and sensitivity. It is not needed to have dirtied your fingernails and worked with marginal farmers and agricultural labourers at the village level to understand their problems. Being a District Collector is enough. There is no need to ex-

perience what it is like to go without three square meals a day to be an expert on poverty and to contribute to the confusion over the debate on the infamous poverty line: it is enough to have acquired the competence to calculate economic levels and feign it. It is not the planners' business to spend time in mud huts or attempt to communicate with tribals or drink water from hand pumps or sleep in the open like millions of people in India. Degrees make them special, position makes them inaccessible and vision (however distorted) makes them feel secure.

Immunity from realities !

The system make us immune to realities and we are not willing to shed our preconceived notions that we have picked up from the 1st and 2nd Worlds. We still look there for ideas and formulas. Very subtly but effectively we have been conditioned to show freedom and independence within limitations. We are still

proud that *our* planner has recently returned from the London School of Economics, the World Bank, the UN and other similar grassroot organisations as if this is qualification enough to bring you closer to the poor. Obviously we have lost our self-respect to think independently, to see with our eyes open and to plan with our eyes and ears on the village instead of using it to get a cushy place in some university or international racket abroad. It is shameless how we use the problems of the rural poor for our own personal advancement, to write paper after paper and eventually be called an expert while the condition of that impoverished family in the village remains the same.

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I have seen far too many of these frauds without having done a stroke of honest work in their lives posing as grassroot workers, speaking on their behalf, planning in the air and desperately looking for recognition in their middle age. It is pathetic and sad but that sums up the profile of a planner today.

Playing with 'models' !

It is fashionable to plan for the rural poor. It is necessary to play games with 'models' and flow charts and speculate on how people would respond to typical situations—as if it is the easiest exercise in the world to predict precisely how an illiterate impoverished peasant and his family would react to schemes for his own welfare. In 15 years in the villages we have not managed to do that. We have not managed to plan one month ahead let alone one year but presumably planners have other mysterious skills village level workers do not have or powers like seeing in the dark. Ask a District Collector whether he has even managed to keep his schedule as he has planned it one day ahead and see what he says. It is virtually impossible with the pressures and with the demands of the community along with calls from the State capitals and visitors dropping in without notice but wanting to be noticed to plan one week ahead. Well multiply that one hundred times without the luxury of regular meals, without security and never free from fear or harassment or humiliation from the very people the government pays to do just the opposite and then visualise the man we are planning for : The planning process has decreed the colossal delivery systems designed to provide Minimum Needs to more than 300 million people living below the poverty line and yet all we have to show after 3 decades is a commentary that clearly testifies to the collective failure of the refined minds of educated men. We have been trying so hard to ram western alien models, management techniques and

urban ideas down everybody's throat in the name of rural development and the planning process that it is time we woke up to the fact that it is not going to work. We have to try indigenous alternatives, more Indian, more rural and we must be able to develop it without calling moronic and mediocre experts from outside who are clueless about rural conditions. Do we have it in us to stop playing games ?

Why blame planner ?

In all fairness we should not blame the planner for his impotence. He has been loosely educated in the West but he has been brought up to believe what is right for the country because it has been proved in the 1st and 2nd Worlds so why not in India ? Yes indeed if Japan can do it why not India ? We can go on asking these questions endlessly but I keep thinking of the Block Development Officers in my life where the buck stops who everyone has taken for granted and how we have successfully managed to devalue and destroy this crucial link irrevocably by the planning process. Why do we have such narrow-minded and short-sighted people called planners who cannot see beyond their nose ? This could not be a deliberate policy. There must be a mistake somewhere and it is within us. He comes from a different background. He comes from a different culture. The only thing that makes him Indian is his colour. He admires the West and feels sorry for this country. He is dazzled by technology, impressed by systems that convert a human being into a statistic and a district into a dot. He believes in the Constitution but more than half the people in this country have never seen it let alone read it. He believes in human rights and social justice and equality but does not see anything wrong in planning projects that do not take these issues into account, may even violate it in some cases. He expresses horror at the exploitation that is evident between castes, between classes and communities but more often than not he is not willing to take a stand and take action on such issues. He is strongest on economic

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issues and most comfortable when it comes to calculating 'viability' of schemes. It matters little if it is not possible to implement it but it must look tidy and neat and at least on paper there must not be any loose ends. Figures are so real to him that it becomes the last word.

And his protectors !

Mahatma Gandhi talked of the importance of mixing intellect with labour. Too much of intellect and 'virtually no manual labour has made our planner what he is—impractical but at the same time supremely confident that he is right. He has Western logic to

back him and Indian hierarchy to protect him. If the project is successful he gets the credit : if it is a disaster the lower government functionaries are to blame. If a formidable and intimidating document is not understood by district level officials and lower government functionaries is it the planner's fault? If the reasonability of certain schemes and their viability are based on outdated figures and it is impossible to change it is it the planner's fault? If certain strategies thought of in the corridors of power in Delhi prove to be counter-productive is it the planner's fault? If there is a growing communication and credibility gap between the planner and the implementer

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who is to blame? What makes the planner superior? Why must he have the last word? What game is he playing?

Surely the roles need to be reversed. Surely the man who implements programmes at the village level need to be given a hearing. In actual fact he suffers from neglect. His channels of communication with the planners are effectively blocked on grounds that 'it must go through proper channels' which, in effect, means you might as well forget it. This, to my mind is the great tragedy in Indian planning : means of communication have been strangled which means reliable and valuable information is not allowed to reach the right quarters. One does not need a degree from a foreign university to come up with a solution at the village level. The planner has this great gift of making simple solutions look complicated. The

"The planning process has decreed the colossal delivery systems designed to provide Minimum Needs to more than 300 million people living below the poverty line and yet all we have to show after 3 decades is a commentary that clearly testifies to the collective failure of the refined minds of educated men."

district and village level functionaries have the ability to de-mystify processes and adapt them to be understood by the beneficiaries themselves but such skills are not appreciated. The de-mystification of technology is looked upon as another way of bringing in quackery through the back door and the vested interests are as virulently opposed to it as planners are on the issues of decentralised planning. Any move to strengthen the hands of the beneficiaries of the planning process is effectively scuttled. Any move to recognise village skills, local knowledge and rural wisdom for development purposes is completely outside the comprehen-

sion of the planner and it is not likely to receive his support. This is obviously because his practical experience is limited but he will be the last one to confess this deficiency in himself. The planner has in fact set the unhealthy trend of looking on the problems of the rural poor from a global perspective where at least he will be safe. It is a game he knows how to play and where he is at his intangible best.

The aura around him !

What makes matters worse is the aura that the planner has managed to build around himself. If a field problem looks tricky call the expert, the planner. If schools are not running and there is a drop in attendance there is something wrong with the system so call the educational planner. He may not have run a school in his life or ever been a teacher but that is immaterial. If there is something wrong with the health delivery system it is easier to call someone from outside to study the problem, a hot shot foreign UNICEF expert perhaps, whose only knowledge of India is that it is full of snake charmers and maharajas. Many a project has seen the arrogance of such expert planners in areas such as the repair and maintenance of hand pumps for safe drinking water, in the design of programmes for women and children

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in rural areas, in preparing plans for the release and rehabilitation of bonded labourers even though they have never met one in their lives. The list where they have the authority to interfere is endless. Their advice is sought on field matters which is one reason why the credibility gap between the government and the people has become so obvious.

"And if I could change things" !

If it was in my hands to change the set up what would I do? I would make sure the planner stayed a major portion of his time in the village. He need not work with his hands because by the time he gets to some position of power and authority he is no longer as healthy as he should be. But he must observe, he must sit and listen. He must be accessible and speak to people as a human being. He must see his plans being implemented from the other end, see how it is interpreted and distorted to suit the powers that be and then decide right there how to plug the loopholes. If he takes planning seriously he must have the time to see its effects, good or bad. He must refrain from pontificating on the projects he has conceived because he tends to think globally or nationally and really no one is interested in listening to such projects in the

village. If anything the response of the villagers should help the planner come down to earth, come down to the nuts and bolts of the immediate problems facing them and see how they tackle it for themselves. See how the poor are more self-reliant than the richer half of the village who are more dependent on government: see how the poor actually practice integration without having to create infrastructures. There are lessons to be learnt there that illiterate (but not uneducated) villagers can teach the planner that no books or studies or reports can teach in a lifetime.

The unlearning process for the planner can indeed be traumatic and it takes greater men that we have to want to be changed by someone who he regards as socially and economically inferior. The planner will see how difficult it is to get—what he thinks are too simple to spend time on—pensions, loans, subsidies, inputs, health services, sending scheduled caste children to schools in the interior. One hopes he will realise when he sees it for himself how indifferent the system is to the problems of these non-persons and

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then may be he will change and we might see some change in the planning process. Right now he has preconceived ideas and plans that must fit or else he rejects it outright.

The planner would also see how figures are collected at the village and block level. There is no competent system that ensures the collection of proper

data. It is not considered important. In fact it is taken as a waste of time and functionaries usually sit at tea shops and fill in the blanks. For their own safety and interest patwaris, gram sevaks, cooperative inspectors fiddle with figures and play the game planners play at

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the block level. Multiply that by 5,000 Blocks in this country and imagine the figures, planners are planning with.

And the hope !

It is a game now but it need not be and we have it in us to change it to mean much more. But we are distracted by our selfish ambition to use it as a stepping stone to gain recognition and attention. In the final analysis the poor always suffer. There is no urgency and even less commitment. Those who have broken away from the usual way of doing things are considered eccentric within the bureaucracy. Well, if I have to pin my hopes on anyone for planning to have more meaning I would do so on these handful of bureaucrats who are not willing to be dictated to by the system where mediocrity is a qualification. For them it is not a game. In their own way they are setting an example and I think, it is only a question of time before their numbers grow. For the present Mark Twain's words would suffice, "To do good is noble. To tell others to do good is also noble but much less trouble."

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Educationists

Look at the way they soil the field !

P. M. Bhargava

What exactly are the doings of our educationists ? Ask the victims—the student community, pleads the author, a distinguished educationist. “Ask them, what have they received from the educationists and the academicians of the country ? Guidance ? No. Knowledge ? Good heavens, no. A well-set example ? Perhaps, yes. That is why we have the student discontent, the frustration, the senseless demonstrations and demands, the display of the graffiti on the walls” ¹

WHO ARE THEY ? They are, in our country, the college and university teachers, researchers, and educational administrators who run the system—but not the school teachers who are, in fact, the victims of the system.

They are the ones who could be gheraoed. Ever heard of a *school teacher* being gheraoed ? With all his faults and flaws, such as the lowest of salaries and status, he works harder and is generally closer to the students than a university teacher, or a ‘higher’ academican, is. Our schools are far from ideal—they aren’t even sufficient. But, there is some modicum of respect that an Indian school teacher still elicits from his charges, in contrast to our educationists. If a university can today find 10 members of its faculty being truly respected, admired and looked up to by

the students, the university must congratulate itself. Even if it did, the chances are that such self-satisfaction will be short-lived. Every one else but the students, will make it hard for the true academican to stay on.

Their origins ?

They come from a highly select population. That wouldn’t be bad in itself, but they are uncomfortably “inbred”. In a country of some 700 million people, they come—generation after generation—from a group that would today represent no more than 20 million (less than 3 per cent) of our population—some 4 million small, and perhaps, half-a-million large families. In these families, every child, irrespective of what his/her merit is, shall go to school, go through high-school, enter college, finish college, enter university, obtain a degree (usually a post-graduate degree or something equivalent), and get a job. Just look around. Is there any child of a friend of yours in whose family education has not run for a generation or two, or who does not have a degree, or who is unemployed ?

These families represent the affluent, the privileged, the rulers—the group for whom the rest of the 680 million people work. It has been so far a long time with these people. In fact, in our country the most important difference between people is not that of creed, language, state, caste or sub-caste, but that of education or lack of it. We have, indeed, two classes totally apart from one another : the privileged 3 per cent who have had access to education, for generations, and the remaining 97 per cent who have had no access to education, again for generations. From the second group, only about 10,000 persons a year, perhaps, enter the first group. This changes the complexion of neither group; in fact, the value system (to which I shall come a little later) of those

lege of crossing over to the privileged, educated class, changes to that of the latter. The children of the educated, get educated; the children of the uneducated, remain uneducated. So it has been, and continues to be, generation after generation.

What I have said above is borne out by many different observations and facts. For example, we have only some one-tenth as many high schools as primary schools, whereas we should have as many high schools as primary schools. The analysis of the background of all those who enter institutions like the IITs or the All-India Institute of Medical Sciences, or of those who get into the Institutes of Management or into the central services like the IAS, the IFS or the IPS, has repeatedly borne out that a vast majority of them come from a privileged background—the hall-mark of 'privilege' being education in the family.

"Ever heard of a school teacher being gheraoed ? With all his faults and flaws, such as the lowest of salaries and status, he works harder and is generally closer to the students than a university teacher, or a 'higher' academician, is".

Our educationists, therefore, come from the exploiting, the privileged, the affluent class which would include you and me : certainly over 95 per cent of those who read this article !

And their values ?

As may be well predicted on the basis of their origins, the value system of the educationists and the academicians in India is generally that of the exploiting class. Many of them are there just because it is a nice cozy, prestigious, white-collar job where they can get away without doing much—a job where the output is difficult to measure unlike for a school teacher. They are certainly not there because they care for education or academic work. Indeed, how does it matter ? After all, his children are going to "get educated", get a degree, and get a job—no matter whether they study or not, or deserve it or not. Our present educational system is designed for that. Copying, strikes for lowering of minimum marks, pressures and a variety of ingenious malpractices—there are all these easy alternatives (aided and abetted if not invented by the educationists) to study and learning : for if you come from the privileged background, all that you need is the stamp of a degree, not the knowledge.

Our academicians and educationists are generally not interested in reading, in learning, or in teaching. Check, for example, how many classes does a university teacher take in relation to the number of classes that he is expected to take or he ought to take ? And even if he takes a class, ask the students what does he do there ? How many books of any value he has read in the last five years, or he owns ?

The concern for others—for the rest of the 680 million people—is not for them. Their main concern is themselves. The only thing they have learnt, through whatever little education, or rather exposure to education, they have had, is to find an alibi for their own failures. It is the Government's fault. It is the fault of someone higher up; it is the fault of the people, or the system, but never their fault—never the fault of those who have received the most from the society : who have received the greatest gift that man can ever have (the gift of education), and that too at the cost of deprivation of so many others. Indeed, the educated 3 per cent of our population have rarely realised how privileged they are, and that their education had been paid for and made possible by the toil and perspiration of the remaining 97 per cent of the people.

There would be rare few educationists or educated people, who ever feel a sense of responsibility towards those who have contributed to their "success", who ever feel that if the competition was truly open and if the remaining 97 per cent would have also taken part in the process with the same advantages that the educated have had, there would be only one chance in 30 that the members of today's educated elite would occupy the positions that they have at present, for, if anything, the 97 per cent unprivileged are a little more intelligent than the privileged ones. (The argument : intelligence, in a way, is just another name for the ability to cope with an adverse environment. The unprivileged, 97 per cent have been that way for generations—even 100 generations or more. They may have, therefore, been selected for this quality, those who did not have this quality having been eliminated, a la Charles Darwin !)

No, not like that !

You would imagine that our educationists would be secular, would have courage, would associate dig-

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nity with labour or would respect basic human rights. Most of our academicians and educationists, and other members of the educated class are, to the contrary, parochial, dowry-demanders, wife-burners, and devoid of any sense of dignity of labour or of basic human rights—excepting, of course, when it comes to themselves. The group of the so-called educationists and academicians in the country have never—not on a single occasion in the entire history of our country after independence—shown courage : they have never taken a stand as a group on any issue.

and privilege for a cause. They have never fought together for any cause or issue that transcends their interests. Individuals, of course, have, but not the educationists or the educated as a group. Altogether, they are obscurantist, superstitious and tradition bound; they believe in astrology and homoeopathy but not in evolution. There are professors of Zoology (and other scientists) around the country who might teach the theory of evolution in the class but in their personal lives they teach just the opposite—that man was put on this Earth all fully formed by God, as a deliberate act of creation

Exceptions unto themselves !

Our educated are generally exceptions unto themselves. Personal integrity and honesty is for others—not for them. They are the ones who would bribe for a seat on the train, file a false income tax return, and take loan from the government on nominal interest to build a house and then rent it out on an exorbitant rent while living in a highly subsidised government house. They are the ones who would use their power, position, influence and connections for obtaining a job for someone, or a seat in the college for

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their child, or a reprieve from justice for a gross, deliberate and dangerous traffic violation, and then criticise at the top of their voice everyone else who does so. For, they think the world was created for them, and for them alone. Their desires, wishes and fancies must be fulfilled, for they were born in the image of God, destined for the highest of privileges which they then demand as their birthright. Commitment and concern are not for them—but ‘phoren’ goods are, as are foreign trips. What wouldn’t they do to go abroad—stoop to any level !

It is our educated who are the purveyors of corruption and of the most reactionary ideas. The RSS and the Jamaat-e-Islami have more educated people than the Communist Party of India has—just the opposite of what one would find in those countries where education is not a prerogative only of the privileged class.

There are exceptions, of course, to what I have said above and to what follows. I bow to them in respect and admiration. The country does not know what it owes to them. Their life, work and struggles would make a story often more exciting than the ephemeral tales we see depicted on our celluloid. They are the unsung heroes who have valiantly attempted to hold the decaying fabric of education together. But who

cares for to make them ineffective.

Their ambitions !

First, let us see what are *not* the ambitions of our academicians and educationists. Truly academic accomplishment is not their ambition. Playing a responsible role in the society so that those 97 per cent of our population at whose cost they have been educated, would benefit, is not their ambition.

“Their main concern is themselves. The only thing they have learnt, through whatever little education, or rather exposure to education, they have had, is to find an alibi for their own failures. It is the Government’s fault. It is the fault of someone higher up; it is the fault of the people, or the system, but never their fault—never the fault of those who have received the most from the society.”

But it is their ambition to go up in the hierarchy. To make money. To have position and authority. No matter how, and at whose cost, and irrespective of whether they deserve it or not. Just look at the number of court cases in which our academicians have been involved. Look at the number of recommendations that are received for the appointment of a lecturer, reader, or professor in a university! Look at the basis on which these appointments are made, and how much (or little) note is taken of merit. How many people do you know who have the courage to resist or ignore such recommendations ? How many people you know are willing to accept that another academician is better than he is—specially if he belongs to a different caste, creed or group ? How many educational institutions there are in which there is a department where the entire staff get along with each other and each one speaks well of the other—where everyone is not trying to cut the throat of

“The group of the so-called educationists and academicians in the country have never—not on a single occasion in the entire history of our country after independence—shown courage: they have never taken a stand as a group on any issue. They have never staked their position and privilege for a cause. They have never fought together for any cause or issue that transcends their interests.”

everyone else and go up in the hierarchy by the shortest possible route in the shortest possible time, with academic work, and integrity thrown to the winds ?

It is the culture of easy life and of public relations that dominates our academicians and the educationists in the country. Their stunted thinking process makes them propose impractical, totally untenable solutions to problems, which they demand be accepted. Their lack of commitment to academic work

makes them do trivial things in their 'academic life', whatever little is left of it. No surprise, in terms of quality we rank very, very low, even though we have the third largest scientific manpower in the world.

Visit the house of an average educationist in the country—say a university teacher. Look at what he reads and what he has in his house by way of books or magazines. You will probably find *Femina* or *India Today*, but if you were to ask him of five serious books (not Perry Mason or James Bond) that he has read in the last five years, he would have difficulty in naming them. He would be out of date in his own area, leave aside in related areas. Yet, he will speak with authority, have high ambitions, and achieve them, being helped by the system which makes a virtue of mediocrity, selfishness and dishonesty, and a vice of excellence, integrity, concern and commitment.

And their doings ?

Ask the victims : the student community of the country. Ask them, what have they received from the educationists and the academicians of the country ? Guidance ? No. Knowledge ? Good heavens, no. A well-set example ? Perhaps, yes. That is why we have

"There are professors of Zoology (and other scientists) around the country who might teach the theory of evolution in the class, but in their personal lives they teach just the opposite—that man was put on this Earth all fully formed by God, as a deliberate act of creation."

the student discontent, the frustration, the senseless demonstrations and demands, the display of the graffiti on the walls ! Indeed, our educationists and the academicians are amongst the largest patronisers of petty politics. If the academic community were strong, it indeed there was an academic community (for, sociologically, a community is a group of people that have come together on the basis of a common commitment conceived in reason, that transcends personal interests, which group uses all its assets to fulfil this commitment), many of our problems, including the student problem and the generation gap, would not be there in the measure we have. If, indeed, we had a community of true educationists and academicians in the country, it would have acted as a major tempering agent in the absurdities of our political process. As of now, we have legislators that our educationists and academicians deserve. Perhaps on an average, there might be greater literacy among our educationists than in our legislators and parliamentarians but, certainly, our educationists are no more educated than the legislators and the parliamentarians are !

And the consequences !

The most important of them all is the fact that we have, today, a large number of people who go through

the university system who should not have done so. They would have done better in other jobs, even made a mark for themselves elsewhere. Our educational system and the educationists have thus bred mediocrity. On the other hand, we have deprived ourselves the use of 97 per cent of our gene pool—the talent contained in the 97 per cent of the uneducated, the unprivileged class. The quality to quantity ratio amongst the educated in the country is, for these reasons, the lowest in the world. This is not to say that we haven't accomplished anything. I have elsewhere stated with a sense of great pride what our accomplishments since independence have been. They

"How many educational institutions there are in which there is a department where the entire staff get along with each other and each one speaks well of the other—where everyone is not trying to cut the throat of everyone else and go up in the hierarchy by the shortest possible route in the shortest possible time, with academic work, and integrity thrown to the winds ?"

have, however, been possible in spite of our educational system and educationists and not on account of them—just as we had a Nobel Prize in science in the 1930s not on account of the educational or the political system of that time, but in spite of it.

Another important consequence is student indiscipline, and student discontent. I have no doubt in my mind that if our academicians and educationists were such that the student could look up to them, a good proportion of such problems would not have existed.

Then, of course, is the fact that the average quality of students that go out of the portals of our higher educational institutions today, is extremely poor. They will be the educationists of tomorrow. So the process is perpetuated, and the class distinction on the basis of education, continues from one generation to the other.

"Their desires, wishes and fancies must be fulfilled, for they were born in the image of God, destined for the highest of privileges which they then demand as their birthright. Commitment and concern are not for them—but 'phoren' goods are, as are foreign trips. What wouldn't they do to go abroad—stoop to any level ?"

Indeed, one of the three or four major causes of our national problems, is the fact that over 95 per cent of our people are not truly educated. This is what is responsible for poverty and deprivation, for disease, for frustration, for the increase in population and, above all, for exploitation. Have you ever seen a truly educated man as bonded labour—or even employing such labour ?

ONE

There is only one long-term solution. Democratised education. Make sure that every child that should be in school, is in school, and that every child who enters school, goes up to the high-school level. One would, obviously, also need to ensure that every

"It is our educated who are the purveyors of corruption and of the most reactionary ideals. The RSS and the Jamaat e-Islami have more educated people than the Communist Party of India has—just the opposite of what one would find in those countries where education is not a prerogative only of the privileged class."

child has the same opportunity given to it by the State or by the community as may be given to any other child, in respect of school education. (If we take care of school education, higher education will take care of itself.) Therefore, abolish public and private schools, and have only one kind of schools—the State-run schools in the country. It is only then that we would be able to force our schools to run well, and the standard of education in the schools would go up.

TWO

Give the *school teachers* what is their long due. Give them respect. Give them a good salary. Make them the most highly paid persons in the community.

THREE

Nationalise school education and devise curricula, syllabi and text books which make sense, which would, without indoctrination, help in inculcation of a value system—a value system which we all would consider axiomatic. Education has never been value free, no matter what its proponents might have said or continue to say. Those who maintain that it should not be value-oriented, only mean that it should retain the value system that is inherent in it today, a value system which ensures that the privileged could retain their privileges, and the underprivileged would stay where they are.

FOUR

And plan for as many high schools as we have primary schools today. Assess what the minimum requirements of these schools would be. I have no doubt that these requirements can be met if we want to meet them. It is well within our resources, especially with the technologies now available. (I have described a possible blue print and worked out the resource requirements elsewhere; P. M. Bhargava, *New Quest*, Vol. 15, May-June 1979, pp. 147-158.) The question is not of resources or whether we can do it; it is of whether we *want* to do it, that is, whether our educationists want to do it; for doing so will eventually affect *them* and their class.

FIVE

And that leads me to the final point. There are only two other groups of people in our country, who compare with the educationists and academicians in regard to what I have said above: the politicians and the business people (with, of course, notable exceptions as for the educationists). In essence, it is the educated elite-business-politician axis that has been the bane of our country in the last 25 years. The above suggested solutions would be utopic unless this axis is broken. For that I have no solution, for the

"Another important consequence is student indiscipline, and student discontent. I have no doubt in my mind that if our academicians and educationists were such that the student could look up to them, a good proportion of such problems would not have existed"

axis makes a most vicious circle. The academician or educationist in our country is partly a business man and partly a politician; the politicians and the business men are partly each other and partly educated!

Yet I have no doubt, people—our people, the oppressed and the underprivileged—should find a solution, if not today, tomorrow; for history tells us that no oppression can last for ever. It is a great pity that our today's oppressors are, in the Brahmanical tradition, the educated of the country—which "caste" includes the educationists and the academicians.

"Visit the house of an average educationist in the country—say a university teacher. Look at what he reads and what he has in his house by way of books or magazines. You will probably find *Femina* or *India Today*, but if you were to ask him of five serious books (not *Perry Mason* or *James Bond*) that he has read in the last five years, he would have difficulty in naming them."

They have corroded the entire system !

Amrik Singh

The basic issue, says this renowned educationist, is that the education system, particularly higher education, has got corroded from within and right from the top to the bottom there is corruption everywhere. It's no use saying, he argues, that corruption exists elsewhere too ! But, then, isn't education different from everything else, he asks.

A QUESTION SOMETIMES RAISED in regard to higher education is : What is the single most important problem that requires to be solved ? All kinds of answers are given. I do not propose to discuss the details of anyone of them. Most of them in my opinion evade the basic issue. The basic issue, as I see it, is that the system of higher education has got corroded from within. Corruption has penetrated it from all sides and at various levels. There are any number of structural, administrative and academic problems that require to be solved. But more important than each one of them is the fact that the stench of corruption must be removed from higher education and then alone can one, frankly speaking, grapple with those issues and solve them to some extent.

I quite realise that at one go I have made several sweeping statements. Some of them can be challenged and will be challenged. It is important therefore to be specific and in particular to explain what is meant by corruption.

It is not necessary to quote the dictionary meaning of the word corruption. As a part of one's growing up, one comes to see a kind of relationship between what a person deserves and what he gets. This is not to discount the fact that there are individuals who have an exaggerated, if not also a neurotic, view of what they

deserve. Such cases are to be disregarded however. But there are certain obvious facts which must be recognised for what they are and dealt with accordingly. For instance, a university professor has to have some degree of academic training and a certain measure of academic and other experience. When another individual who is distinctly short of these requirements either aspires to be a professor or actually becomes a professor, I would regard it as an act of corruption. Not everybody would agree with this formulation but then it is a matter where agreement is not all that easy. So much depends upon one's point of view and to what extent one is prepared to overlook or condone what perhaps deserves to be nailed down.

Let's pause and ponder !

There is a reason why this particular example of a university professor has been given. In countries where the university system is strong and well respected there is a recognised convention about what kind of a man should be university professor. Attempts to express this convention in the form of a formula cannot always succeed. But this much will be recognised that a university professor is a good scholar, has some experience of guiding research as well as doing research. Not only that, he knows what is happening in his chosen field of study and what is happening on the frontier areas of knowledge in which he is interested.

If this concept of a university professor is applied to what we see around us it would be at once clear that something like 80 to 90 per cent of people appointed to these jobs should not be where they are. The situation has become distinctly worse since the latest UGC provisions of almost automatic promotion after a certain number of years came into force. There are universities where in certain departments there are a dozen professors, two readers and not even one lecturer. This may not be so in every place but the very fact that there are certain institutions where such a thing has come to pass should make us pause and ponder over the situation.

These words coming from an ex-academic would fill a large number of the academics with indignation and rage. I should not be surprised if quite a few hate-letters are written on the subject. But the fact remains that the situation has become pathological. The principal explanation for what we see around us, as I see it, is that we have lost the link between what one deserves and what one aspires to get or actually gets. There are a number of judgements involved here and each one of them can be questioned. What is more, things can never be seen from an absolute angle. Anyone who feels that he is being criticised will discover a dozen precedents, if not more, where much 'worse' people have got what they should not have got. In saying so they would be perfectly right and it is not possible to disagree either with their statement or their perception.

That is precisely my point. Higher education has got corroded from within and right from the top to the bottom there is corruption everywhere. Chancellors who should act with dignity and detachment do not always act as such. Except for a small percentage of those who get appointed as vice-chancellors, the rest just do not deserve to be where they are. The same goes for deans, for professors, for readers and for lecturers. At every level there has been dilution. Dilution would have been a more appropriate word 15-20 years ago. But now there has been a qualitative change and that is why the word corruption is being used. My definition of the word corruption is much more comprehensive than what would be ordinarily understood by it. The nub of it lies in the relationship between what one deserves and what one gets or aspires for.

Well, it is different here !

Corruption does not originate in education. For the most part, it begins elsewhere and penetrates education. It is difficult to define 'elsewhere' for anything outside education is elsewhere. There is so much of corruption outside education that there is nothing

"The basic issue, as I see it, is that the system of higher education has got corroded within. Corruption has penetrated it from all sides and at various levels. There are any number of structural, administrative and academic problems that require to be solved."

particularly surprising about the infection having spread to education as well. But then an important part of my argument is that education is different from everything else.

Education is what prepares us for life. If we get corrupted in that process it follows almost as inevitably as day follows night that in later life too the same corrupt approach would govern the greater part of our conduct and mode of action. Though originating elsewhere, corruption in its various manifestations pervades education all along the line. This happened quite sometime ago, so that from one end to

the other education is now riddled with corruption. Those who enter life through the channel of education, and one is talking mainly about them, carry the infection with them. In a sense, thus, the cycle is complete. Corruption may have started elsewhere but because it has already affected education and education in turn is the channel of entry for a large number of people into life, the circle may be said to have been completed. To blame any individual or any group of individuals or even an institution would not help. The fact of the matter is that the entire blood system has got infected.

"The principal explanation for what we see around us, as I see it, is that we have lost the link between what one deserves and what one aspires to get or actually gets. There are a number of judgements involved here and each one of them can be questioned."

This tragic phenomenon !

A more relevant question to ask would be : how is this situation to be taken care of ? There is no clear answer to it. Anyone in education will tell us that the rot begins elsewhere and they are the victims. To quite an extent they are right also. But does one know of anyone in any station in life who is prepared to admit that it is for him to take the initiative and put an end to what is happening ? Everyone shifts the responsibility to another. One can go around the whole circuit and nobody would be prepared to accept the proposition that it is for him to break the chain. Whether it is the politician or the administrator or the teacher, it is all the same; everyone has the same answer. Everyone blames everyone else. Nobody is prepared to accept the proposition that by refusing to play the game, so to speak, he would be breaking the chain.

But the chain has got to be broken somewhere. Ideally speaking, regardless of what others do or do not do, everyone should do the correct thing so that there is no taint of corruption in what is done. One has to first deserve and then desire. It is the lack of alignment between the two which creates problems. There is nothing novel about this correspondence between one's deserts and one's achievements. The Buddhist concept of *dharma* embodies this very idea. In European terms, when Plato talks of justice he too is saying almost the same thing. What the Gita says is another version of what is under discussion. Any deviation from what one deserves and what one gets creates a kind of imbalance in social and legal terms and that is what takes the form of corruption.

Thus far and no further

In concrete terms, one has to look at the mode of admission, the mode of instruction in the classroom, the examination that is held at the end of it and it is clear beyond doubt that each one of these steps is far from what it should be. The whole procedure of the training, selection and recruitment of teachers who

which cannot bear too close a scrutiny. Elsewhere I have analysed this phenomenon as an example of the middle class virus. The fact of the matter is that this virus has infected every other walk of life. Everyone in education therefore says : how is it our duty to be virtuous when others, more or less one and all, choose to be wicked ?

My answer to this question is that the imperatives of the profession so demand it. Those of us who have opted for education, knowingly or otherwise, opted for a profession where there is hardly any room for chicanery or wickedness. What we do does not remain confined to us. It gets transmitted to those who come in contact with us, i.e. our students. In plain words, through our questionable conduct we become the carriers of an infection. If we do become the carriers and do infect others, the question to ask is : can we afford to take an indifferent view of our responsibilities ? The truth of the matter is that the question is seldom asked and that is how we have been drifting over the last quarter century or so.

Somebody at some stage or the other has got to say : thus far and no further. In my opinion, the one profession which is obliged to adopt this posture is the profession of teaching. When teachers act and behave like 'others', they are ignoring the social consequences of their profession. Teaching is not a profession which is practised in private or for one's self. It is not like acting or architecture or any such profession where the skill of the individual is all important and the social dimension does not count. There are several professions where the social impact is immediate and unmistakable. Journalism, for instance. In all such professions which have social overtones the consequences of what one does cannot be ignored. To ignore them is to almost turn one's back on one's profession.

This examination business !

A good deal of what has been said is in general terms. This means that either not everybody will understand what is being said or people will agree and yet not get the point in clear and unambiguous terms. It would be helpful therefore to take at least one concrete example of what is being said.

In our country we have tremendous faith in the examination system that has evolved over the years. Most attempts to change it have been in terms of the American practice of assessment by the teacher. Almost each one of these attempts has misfired. Outside the IITs and the agricultural universities, the only university which tries to adhere to it is the JNU. One has only to talk to some of the more candid teachers to get a measure of their disenchantment with the system. Not only that, the system of public examinations has received an extraordinary degree of endorsement during the last few decades. Aware of its limitations and its defects, as a large number of people (both academics and others) are, they still regard it as the lesser evil. Why ?

mously and therefore there is no question of any subjective element being at work. Could there be a worse form of self-condemnation than this that we distrust assessment made by our colleagues in their own name but are prepared to rely upon it almost blindly if it is made in an impersonal manner ? Whatever be the explanation for it, this is the stark truth and for the last several decades despite all the brave attempts made to change the system we are stuck with the system and likely enough this is how it would be for quite some years to come.

For the crooked alone !

Equally deplorable is the corruption that takes place in regard to the conduct of examinations. One does not have to offer evidence for what happens. Everyone who has gone through college or university knows what is happening. In certain places the situation has deteriorated to such an extent that the honest individual is at a serious disadvantage and it is the crooked and the wily who prosper. Others are left only with the satisfaction that they acted with honesty.

Clearly it is an impossible situation. Honesty is at a discount and crookedness gets all the plums. How do we solve the problem ? To seek to solve it by everyone choosing to become crooked is not to solve the problem. As individuals this may be the impulse of a very large number of people. But functioning on a corporate basis and in terms of a social policy no one can put forward this course of action as the one that is to be preferred. If the problem is to be solved it is only to be solved through everybody acting with due honesty and integrity.

The climate of opinion has become so cynical however that to talk of upright conduct is to invite ridicule. It is not difficult to understand why this should be so. In personal terms, such a response is regarded as a mark of weakness of vacillation or lack of assertion or even worse. In terms of social conduct however, can anyone recommend a different approach to the problem ?

To talk of corruption in higher education, and that is the area about which I feel qualified to say something, is not being rhetorical or sensational or some such neurotic mode of behaviour. It is to recognise the situation for what it is. Higher education has no meaning unless there is a ceaseless pursuit of excellence and education has no meaning unless it is based on an honest kind of relationship between what is learnt and the manner in which that is assessed.

Once these two imperatives are recognised, everything will fall in its place. Students will work to the best of their capacity and teachers will work as they should. If these two things start happening, corruption will take care of itself. Corruption is nothing more and nothing less than getting more for oneself than one is entitled to. And this derives from a state of mind which regards a spot of honest work as a badge of shame.

Professionals

The protection of an exploitative order !

Justice V. R. Krishna Iyer

Our power-elite which practise the high callings, says the distinguished author, control, and corner, with monopolistic hold, the modern expertise without which the planned development of the nation may be a medieval process, philistine failure and democratic disaster. And adds, "we have no option but to mandate that the professions shall, be permitted to operate only if they consent to a functional commitment to the common people--the bleeding plebian sector, not the pampered patrician segment."

I REPEAT..... THAT ALL POWER is a trust—that we are accountable for its exercise—that, from the people, and for the people, all springs, and must exist.' (Disraeli). This fiduciary imperative is implicit in the creedal phrase of the Preamble to the Constitution : "We, the people of India." Our power-elite which practise the high callings, learned professions and popular vocations, however, control and corner, with monopolistic hold, the modern expertise and complex know-how without which the planned development of the nation may be a medieval process, philistine failure and democratic disaster. So, we have no option but to mandate that the professions shall be permitted to operate only if they consent to

a functional commitment to the common people—the bleeding plebian sector, not the pampered patrician segment. And yet, in fact, with exceptions which prove the rule, the professions and the people are distant neighbours reminding us of the Shavian barb : All professions are conspiracies against the laity.

Plea for a radical reorientation

The benign potential of the intellectual groups, organised into various professions, to advance the welfare of society is a great blessing if it can be actualised on a people-oriented, progressive basis. The dynamic rule of law, in its democratic militancy and as defender of the little Indian's political, civil, cultural, economic and social rights, will remain verbal bombast, as it does today, unless the legal profession, in its colossal numbers, stands by the people, spreads legal literacy, battles for equal justice and transforms the system through the democracy of judicial remedies and other creative processes which reach the lowest and the lost.

A national health plan whereby every member of our many-millioned society will be assured of at least minimal medical care and basic health facilities will be an idle dream unless the medical profession is geared to this sublime goal. Social medicine *sans* professional participation with ideological commitment makes no sense. To house the poor, to electrify villages, to build rural communications, to industrialise the country and strengthen the public sector of the economy we need the hearty involvement of the engineering profession.

An educational revolution reaching down to the masses and responding to the value radicalism of the Constitution cannot succeed unless the academia is inspired to crusade for the cause. We can multiply areas of national development where the intellectual

community, with special skills and high expertise, must be the sappers and miners of progress with dedication to the masses. The new ethics of the professions with the people factor in the forefront, their 'appropriate technology' tuned to third world conditions, their democratic partnership in the life processes and welfare concerns of the larger, lower bracket of the community and their creative militantisation of the heart and head of every expert body organised as a profession are what I regard as of the essence of the change the change from the elites colonial mentality and monetarist morality currently polluting the many professional echelons and common cadres, to the developmental commitment to, and spiritual identification with, the urban and agrestic underprivileged who constitute human India.

Even scientists as professionals have to reorient themselves. Society's needs, not market economy morals, are the dominant strand in the movement called 'professions for the people' high on the democratic agenda of the nation. And equally important is the demand to shed our colonial heritage in the professional genetic code. Disraeli once said, "The key of India is London" It is a pity, even today, that this is largely true of our professions.

A hangover from the past !

If I may repeat myself for emphasis, India's elite specialists, as a hangover from the past, have with simian skills, adopted anglo-philii fashion and the professional ethics and working methods of their Victorian British counterparts than whom, in our colonial outlook, 'none higher sat'. But the upper bracket clientele are *not*, constitutionally speaking, the people who grant exclusive title to practise professions. The real constituency which matters in a Socialist Republic under Third World conditions is made up of men of humbler means. We have, therefore, to do a social audit, from the performance angle, of the canons and commitments, consciousness and capabilities of all the professions, set distortions right and unfold fresh creative horizons—because the Raj rules of conduct and the Republic's fiduciary imperatives are almost at logger heads.

"And yet, in fact, with exceptions which prove the rule, the professions and the people are distant neighbours reminding us of the Shavian barb: All professions are conspiracies against the laity."

Revolutionary mutations, beyond British Indian traditions, is the price any Indian professional monopoly has to pay because the radical values writ into the Constitution furnish the new parameters—absent when Britain ruled over us and urgent when Independence gave dynamic meaning to development. Old 'conducted tours' of professional training, temper and technology, with an eye on the purses of the rich, lead us now to wrong destinations because, as Marx should not be develop things, but to develop ment should not be to develop things, but to develop Man—Indian Man.

The 'people' factor

The democratic imperative to be impressed on modern professions is the 'people' factor—duty to the common man that legitimises the power these social estates legislatively enjoy, and the *raison d'être* of the exclusive monopoly the laws confer on such title-holders of expertise is the deep commitment, service-orientation and skills tuned to community needs. They must possess beyond the old art and crafts they mastered for the benefit and interests of the

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Establishment which cornered their ingenious techniques, at the expense of the commonalty at a price beyond the reach of the little man and, not unoften, bent to outwit the welfare policies of society.

The pattern of skills and the pickled ethics, in short, the genre and texture of the learned and liberal professions, display affinities, attitudes and empathies antagonistic to the forward goals and larger objectives regarded as the living logic of the Third World. A radical rupture with the traditional culture of the older professions without pandering to the Moneyocracy, is 'a consummation devoutly to be wished', in the current, corrupt Indian context. Positively speaking, a humanist technology geared to the development of the people, a progressive professional mettle socialist in vision, a principled people-conscious code with priority to social justice, a disciplined cadre with unsullied character and pollution-resistant probity—that is the scare commodity in the Indian professional market.

The constitutional mandate of equal fundamental rights is conditioned by reasonable restrictions *in the interest of the general public*. Our Republic expects every profession to do its duty but to whom? To the only national constituency viz. 'the people of India'. This ideological transformation and constitutional compulsion obligates the esoteric members of monopolistic professions to conscientize their perspectives, humanize their expertise, sensitize their tools, accept public accountability and cultivate a social philosophy and democratic creed tuned axiologically to our Socialist Secular Democratic Republic. That is the finer genius and conceptual implication of professions for the people.

What is a profession ?

What is a profession? It is necessary for clarity that we define our terms: Roscoe Pound in the 'Lawyer from Antiquity to Modern Times' (1953) states:

"There is much more in a profession than a traditionally dignified calling. The term refers to a group of men pursuing a learned art as a common calling in the spirit of

public service—no less a public service because it may incidentally be a means of livelihood. Pursuit of the learned art in the spirit of public service is the primary purpose.”

Justice Brandeis (U. S. Supreme Court) applied three criteria to a profession :

ONE

A profession is an occupation for which the necessary preliminary training is intellectual in character,

“The myth and the truth, however, mock at each other, the higher standards of community commitment are often skin-deep and winning one’s case by means fair or foul soul-deep. The era of decadence has not spared any ‘noble’ calling.”

involving knowledge and to some extent learning, as distinguished from mere skill.

TWO

It is an occupation which is pursued largely for others and not merely for one’s self.

THREE

It is an occupation in which the amount of financial return is not the accepted measure of success.

There is no doubt that definitionally, law, medicine and accountancy, among others, are liberal professions. Theoretically, public service motivation and intellectualised expertise for community good are dominant, with a discipline and high ethic to guide their exercise, and income for the practitioner and material success for one’s client being lesser values in the scale. The myth and the truth, however, mock at each other, the higher standards of community commitment are often skin-deep and winning one’s case by means fair or foul soul-deep. The era of decadence has not spared any ‘noble’ calling.

The paranoid bane of professionalism !

Self-interest versus public interest, exploitation of exclusive right to practice by catering to the higher economic brackets, unconcern with Third World clientele, ‘untouchability’ and ‘unapproachability’ of the liberal professions vis a vis the *daridra narayanas* of society, and principles and policies which sound sublime, read majestic and profoundly humanistic in paper rhetoric and yet, in actual application, prove functional futilities, teasing illusions and promises of unreality—such is the paranoid bane of Indian professionalism, be it law, medicine, accountancy or other. Social Justice, in its democratic sweep, is a distant neighbour of elite professionalism. Jimmy Carter, while he was President of the U. S., observed,

at the centenary of the Los Angeles Bar Association :

“We are over lawyered.... Lawyers of great influence and prestige led the fight against civil rights and economic justice.... They have fought innovations even in their own profession.... Lawyers as a profession have resisted both social change and economic reform.”

The other professions also share these views and function as the serfs of the rich and powerful. The problems of the poor are of no concern for the professions. *They do not matter.*

What collective therapeutics can inject a ‘commitment’ consciousness, in the learned callings, to the community, its weaker sections, in particular ? What ombudsmanic regulation by bodies, which include high-level outside elements, to deal with professional delinquency, what attunement of tools and techniques relevant to the invisible but immense ‘dalit’ humans, what crusading operations against the anti-social segments of society, can we innovate to create the value radicalism expected of our professions ? Such is the broadly democratic, militantly socialistic connotation of Art 19(6) ‘The survival of the fittest’, as a concept meaningful to our backward economic milieu, must be oriented to the developmental needs of society. The stark fact is that often the leading cadres of every profession shape their arts to patrician breeds and politician’s needs and shy at the vast human sector hungry for social justice.

The vision and the mission !

While professional ideals look attractive, highbrow intellectuals, appetised by laissez-faire philosophy, sell their mental skills and occupational prestige at the best market price. Who but the tycoon, the mafia, can be the highest bidder and why ? A dynamic dialogue, with focus on the millions, not the millionaires, a structural change in the professions which activates the new popular ethics and catalyses their community dedication, that is the creative call to the higher vocations. The little man will soon awake to his

“The stark fact is that often the leading cadres, of every profession shape their arts to patrician breeds and politicians’ needs and shy at the vast human sector hungry for social justice.”

Kundalini shakthi, govern the governors, judge the judges, audit the auditors, police the police, doctor the doctors, socialize the morals and conscientize the processes of lawyers, auditors, doctors and so on. This is the vision and mission of the movement styled, ‘the professions for the people’, which desiderates systemic change, not individual altruism. A Good Samaritan soul must incarnate in the corpus of each profession, and a cultural revolution, essentially Indian, must shake and shape the professions to infuse a spiritual urge to rescue the *Kuchela*, ignoring the ‘Kubera’ not by moralising sound and fury, not by ‘Mareecha’ rhetoric, but by conscientious effort

to promote the progress of the nation through people-oriented skills and resources of which the great professions are a large reservoir. This is the least social justice every profession owes to the Republic which is but symbolic of the humble humanity of India.

Can't serve two masters !

The thrust of my thesis is that professions cannot serve two masters at once—the classes and the masses, the propertariat and the proletariat. Jesus and Judges, the deprived 'pandavas' and the grabbing 'kow-

"Each profession, even the judicial robes and barrister's silk, must stand scrutiny for service to the people not defend itself by medieval estate theory. What applies to judges—the most awesome profession with 'contempt' power to punish critics—must a fortiori apply to lesser callings."

ravas'. A militant movement within the professions must create a consciousness of the ideology of "professions for the people" and professions with a patriotic commitment to Indians. We want movement professionals, geared to the Indian social specifics.

The right to practice any profession is a creature of the Constitution which 'we, the people of India', enacted. No profession can be permitted to play Frankenstein's monster with the Indian Union. A brief glance at Art. 14 and 19 clarifies the issue.

The high-brow cult of professionalism builds barricades against entry by others who may be non-professional and para-professional, resists social inspection of capability, integrity and performance accountability, and fights exposure of tycoon tie-ups and unsocial ethics. Public Law must insist that every public profession does justify itself for exclusive passport for practice in the new setting of democratization, socialization and developmental compulsion.

Not that the role of custodians of better expertise or occupational specialities should not be recognised or respected but that social justice desiderates that insulated vocational protectionism, statutory or other, now enjoyed by the professions, shall not hurt the community, even if draped in tall ethics and 'efficiency' trappings. Professional simplicity and democratic monitoring and methods that meet the needs of the small man must be built into these callings, their disciplines, claims and practical workings. 'In the interest of the general public' is the password to constitutionalize the established callings. Monopolistic vocationalism cannot survive constitutional screening except on the score that professional expertise is for the people's happiness and welfare.

The cult of the robe !

Each profession, even the judicial robes and barrister's silk, must stand scrutiny for service to the people, not defend itself by medieval estate theory. What applies to judges—the most awesome profession with 'contempt' power to punish critics—

must a fortiori apply to lesser callings. Here is what Judge Jerome Frank says about the judicial profession, now being judged even in our country : "The robe as a symbol is out of date, an anachronistic remnant of ceremonial government. An immature society may need or like to fear its rulers, but a vital and developing America can risk full equality. A judge who is part of a legal system serving present needs should not be clothed in the quaint garment of the distant past. Just as the robe conceals the physical contours of the man, so it needlessly conceals from the public his mental contours. When the human elements in the judging process are covered up, justice operates darklingly. Now that the Supreme Court has declared the judiciary a part of candid democratic government, I think that the cult of the robe should be discarded". The Bar too must remember that its members must make out a *prima facie* case for the monopoly it enjoys and re-organise the profession into a public sector which ensures human rights and remedies against human wrongs to the weakest and the protestant. Public law demands of public professions public commitments in public interest and disrobes it of its mystiques.

The Constitutional dimension to the professions, their social responsibilities in a socialistic society vis a vis their closed door policy when para-professionals are a people's need—these and other allied issues have not been explored in the specific setting of our country. If undertaken, the outcome may be risky for the monopoly of the professions now enjoyed under statutes, unless creative mutations are wrought.

The Constitutional guarantee !

Article 19(1)(g) guarantees the title of all citizens to practice any profession or to carry on any occupation. Nevertheless, the State may impose by law professional or technical qualifications, provided such restriction is reasonable and in interests of the general public. If the law degree is shoddy, if the medical qualification is hardly better than quackery, if para-professionals can do better than dubious degree-

"A judge who is part of a legal system serving present needs should not be clothed in the quaint garment of the distant past. Just as the robe conceals the physical contours of the man, so it needlessly conceals from the public his mental contours."

holders, if attorneys and accountants and apothecaries are anti-social in their working, if the learned skills are useless to the commoner like the butcher, the baker and the candle-stick maker and are at the cunning call of the smuggler, the racketeer and the big tax-dodger or abet, the illegal operations of the corporate sector. I wonder whether Art. 19(6) will salvage such professionalism from the competition of lay talent. Profession for the people is a *sine qua non* of constitutional survival. Intellectual call girls of the establishment draped in professional costumes cannot escape brain-scan by the Constitution.

Our medical profession is excellent and can do open heart surgery and kidney transplant as well as their U. S. counterparts. But social medicine, preventive medicine, endemic disease in the backward-most regions, especially the tribal belts—these life problems of the common people are not exactly their professional concern. The up-shot of this discussion is that a radical transformation in the social order of our country, contemplated in Article 38 of the Constitution, inevitably demands a corresponding transformation in professional perspectives with emphasis on Third World imperatives.

And our need today !

The professions need new social engineering structures and strategies to fill the bill of social justice.

'A dynamic dialogue, with focus on the millions not the millionaires, a structural change in the professions which activates the new popular ethics and catalyses their community dedication, that is the creative call to the higher vocations.'

New professional structures must arise from the practical needs of the new clientele. Lawyers' Collectives, Public Interest Law Firms, Poor People's Lawyers, Barefoot Lawyers, Lawyers' Public Sector, National and State Free Legal Services Authorities and so on. Tax incentives, other facilities and public distinction for successful work by such socialised professional personalities and bodies must be organised. Likewise, in Medicine Medicos' Collectives, Barefoot Doctors, People's Medical Co-operatives, Free Clinics, Medical Foundations for Free Treatment of the Weaker Sector, Social Medicine Specialists, Tribal Diseases Therapists, Slum Health Care Volunteers and so on.

Auditors too must break out of the corporate stranglehold and traditional methodology and self-centred culture, and innovate Accountants' Collectives with rural bias, developmental specialisation and new ways of helping small men in managing the finances of their ventures. Ends are means. So, when service to the People becomes the end of the Profes-

sions, means to match must bloom into existence-structurally and technique-wise. This too is a dimension of the Professions for the people movement.

"The little man will soon awake to his 'Kundalini shakthi', govern the governors, judge the judges, audit the auditors, police the police, doctor the doctors, socialize the morals and conscientize the processes of lawyers, auditors, doctors and so on."

A structural revolution !

What we need therefore is a structural revolution and a methodological revolution tuned to the constitutional revolution. Conceptually 'professions for the people' is a new dedication of our higher occupations and a nationalist tryst of the intellectual community. A militant movement, driven by radical humanism, is the locomotion of social transformation. The dialectic of Indian economics and the dynamic of Indian development desiderate this commitment to the people.

The fairy tale of professional autonomy and ethical myths cannot beguile the people because the learned and noble professions *in action* abet the social injustice of an exploitative order. Today, this esoterica is suspected of serving the Barabhasque private sector with expert sharp practice. A spiritual shift in the centre of gravity of the privileged and prestigious professional estates is a 'must' so that their arts and orientation, their creativity and commitment may be

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worthy. Therefore, professional packydermy, as a colonial syndrome, has no Indian future. Tomorrow belongs to conscientised sensitivity to the disabilities of the masses as the strategic focus of the great professional classes. □

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Professionals

It's all a money making racket today !

Soli J. Sorabjee

Lamenting over the sharp decline of professionals—lawyers, doctors, architects, engineers, chartered accountants, journalists—the author while exposing their dirty deeds warns, “If a victim of injustice and oppression cannot obtain adequate legal services because of the prohibitive cost; if a patient in pain and misery cannot find a doctor to cure or relieve him of his suffering, then surely George Bernard Shaw’s indictment that all professions are conspiracies against the laity has been proven true.”

THIS IS AN AGE OF linguistic distortion. Nations whose governments trample upon the basic human rights of their citizens and constantly violate the rule of law proclaim themselves Democracies. Persons who preach hatred and violence in the name of religion to achieve purely political ends are termed ‘Sants’ and are soon regarded as saints. People who have acquired special skills at the expense of the rest of the society and whose sole aim and practice is the amassing of wealth, by means fair or foul, call themselves Professionals.

Alas !

“The purity of language is defiled;
The meanings have turned traitor in night.”

It is worthwhile turning to dictionaries once in a while. Webster defines profession as “a calling requiring specialized knowledge and often long and intensive preparation including instruction in skills and methods.....and committing its members to continued study and to a kind of work which has for its *prime purpose the rendering of a public service*” (Emphasis added).

Roscoe Pound summed up the matter with admirable aptness when he said, “Historically, there are three ideas involved in a profession : organisation, learning, and a spirit of public service. These are essential. The remaining idea, that of gaining a livelihood, is incidental.”

Today the expression "profession" is not confined to the law, medicine and the clergy. It takes within its sweep architects and engineers, chartered accountants and cost accountants, journalists and photographers, nurses and musicians, and the like.

Is politics a profession ?

Curiously the Supreme Court has considered the practice and pursuit of politics as a profession and held that a politician is a professional. But that was in the context of the provisions of the Income Tax Act. No one would seriously consider a politician as a professional any more or any less than one would extend the term to a member of the oldest profession.

There is nothing objectionable about the extension of the term "profession" so long as we do not forget or obliterate in practice one fundamental fact: a "profession" is not a money getting business; it has no element of commercialism in it.

It is not suggested that professionals live on love and fresh air and should not charge for their services. A

"People who have acquired special skills at the expense of the rest of the society and whose sole aim and practice is amassing of wealth, by means fair or foul, call themselves professionals."

professional needs to make money like any other person. He seeks to live by what he earns but his main purpose and desire should be of rendering service to those who seek his aid and to the community of which he is a necessary part. In some instances, where the client is wealthy large fees, not excessive or extortionate, may be received. But to those unable to pay adequately, or not at all, the professional service should be freely and cheerfully given. In fact the difference between business and profession is essentially that while the chief end of business is personal gain, the main goal of a profession is public service.

A money making racket !

Unfortunately in actual practice this basic truth has been rudely thrown overboard. Professionals, seem to operate on the law of demand and supply. As far as the legal profession is concerned, the forces of crass commercialism have overtaken it by and large. It has become a money making racket. Staggeringly huge fees are charged and the bland justification offered is "the client is rich and can afford to pay the fees". Lawyers staying in hotels run up huge bills for entertaining all and sundry at the client's expense and see nothing wrong in it because "the client is rich and can afford to pay". Worse still the thought of rendering free legal service to the needy and to those who cannot afford expensive lawyers does not enter the hearts and minds of the

successful ones. The idea that professionals are for the people and not vice versa sounds like a strange and alien doctrine.

The most unfortunate part is that this virus of commercialism has infected the younger members of the bar especially the junior advocates on record. There are of course a few exceptions, but the majority of the junior members are actuated and driven by only one compulsive thought—to make as much money as possible within the shortest possible time.

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Today the fees charged by juniors, after making allowance for inflation, far exceed what was charged by seniors two decades ago. The thought that the profession has certain social duties and responsibilities and that it is meant to serve the people is absent from their minds and indeed they show little recognition of what is meant by the "service ethic" of dealing with a fellow human being's needs without consideration of self-interest.

Common man their victim !

This social dimension of the various professions becomes a very relevant issue when we look at the manner in which their services remain by and large inaccessible to the common man, particularly in a poor country like ours.

The assumption of our legal system is that all citizens have equal access to means of legal redress. In practice legal services of all kinds have gone to the highest bidders. The wealthiest persons and corporations receive the highest quality advice. The

"In fact the difference between business and profession is essentially that while the chief end of business is personal gain, the main goal of profession is public service."

poorest in the society, the "third world population" receive negligible or very haphazard and poor legal advice. The term "third world" is used as an all-inclusive label for the powerless, exploited elements of society, the depressed minority groups, welfare recipients, ex-colonial, colonial, and neo-colonial "native" populations, the proletariat, and the peasants. It also includes society's "deviants"—prisoners, mental patients, radicals, dissenters, and homosexuals, among others, as well as the powerless

~~supers~~ generally,
conformists.

As far back as 1905, one of the most distinguished American jurists, Brandeis, said, "The leading lawyers of the United States have been engaged mainly in supporting the claims of the corporations. Able lawyers have, to a large extent, allowed themselves to become adjuncts of great corporations and have neglected the obligation to use their powers for the protection of the people."

Alas, the situation in 1984 is not very different. By and large, successful lawyers have been defenders of the established order and of entrenched interests, because in a society dominated by commerce and industry, individual and corporate owners of property have been their principal clients. If this trend continues, the lawyer will eventually be reduced to an inferior and despised status in society.

If I have spoken mainly of the legal profession, the reason is that I belong to it and the price one pays for pursuing any profession is to obtain an intimate knowledge of its ugly side.

And these doctors !

The spirit of service and sacrifice which was formerly evident in the medical profession is also sadly

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on the decline. In many cases poor patients would rather die than pay the extortionate fees of medical practitioners. I recall a typical case of a middle class working lady whose son was admitted to a hospital for treatment. The doctor in charge would cheerfully say good morning every day to her and her son, spend a few minutes chatting with them and then leave them alone. The lady was very pleased at the doctor's friendly and human behaviour till she received the bill in which each of these involuntary visits was heavily charged for.

One hears in anguish about doctors who after having operated upon patients refuse to undertake further treatment unless their fees are paid in advance. False medical certificates can be had for the asking especially to help litigants to obtain adjournments in courts or, if the price or the fee offered is a fat one, to help smugglers who have been detained, to have better facilities during detention.

sure there are honourable exceptions.
trouble is that these are exceptions and the problem is to convert these exceptions into the general rule.

The urgent need for all the professions is to become people-oriented and to reorient themselves towards the service of the people. Otherwise there is a growing danger of the professions becoming irrelevant for the majority of the public. This trend must be arrested.

Unfortunately the real malady is the catastrophic decline in our sense of values. Today we are afraid

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of simple words like goodness and honesty and kindness. We do not believe in the good old words because we do not believe in the good old values any more and that, according to the Chinese philosopher Lin Yutang, is the reason why the world is sick.

Today's scene reminds one of Wordsworth's lines :

"...Our life is only drest
for show; mean handiwork of craftsman,
cook or groom
We must run glittering like a brook
In the open sunshine, or we are unblest
The wealthiest man amongst us is the best

Plain living and high thinking are no more."

If a victim of injustice and oppression cannot obtain adequate legal services because of the prohibitive

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cost; if a patient in pain and misery cannot find a doctor to cure or relieve him of his suffering, because he cannot afford it, then surely George Bernard Shaw's indictment that all professions are conspiracies against the laity has been proven true.

All this must be changed. A strong, persistent and determined drive has to be launched to inculcate proper values amongst professionals and to make them rededicate themselves to the service of the people. □

Preachers or screechers!

K. A. Abbas

So says Abbas Sahib, "it is difficult to write about them all in a single article. I suppose there are enough Voluntary Sweepers in the Gandhian spirit in our society who will tackle the other groups, so I will tackle only the preachers (religious) and God-men, God-women and God-children who are proliferating pseudo-spiritual 'filth' and pseudo-mystical 'dirt' and thus confusing the already confused minds of our people".

THE OBJECTIONABLE AND DIRTY "preachers" of different (known and unknown) religions are more aptly described as Screechers. They are assuming names like Mahaacharya and Brashtacharji Maharaj, Khadimul-Inaan, and Apostle of the Gospel; they screech (like a broken gramophone) their Message in some strange language which goes above the heads of their congregation, but, during their screeching, drop hallowed names like Rama, Krishna, Buddha, Mohammed or Christ, with great familiarity and affectionate informality, as if they were their bosom pals; they speak even about the infinite God or Bhagwan or Allah as if He was their *yaar*!

Glamour of Godhood

For instance, I heard one of these screechers say with pontifical eloquence, "Brethren, I saw the effulgence of my *friend* glowing with a peculiar glow, shining with a strange shine, it was the glitter and glamour of Godhood. It was Beauty unseen in the

world's beauties, whether it is the beauty of Hollywood actress Hedy Lamarr or the alabaster face of Marilyn Monroe, much less of Indian stars like Vyjayantimala or Zeenat Ameen."

Another (*Fidayee-Paighambar* he called himself!) was screeching, "*Insha-allah, maasha-allah*, when the Prophet saw the face of God, it was Beauty Personified, beyond description, it was un-imaginable Heavenly beauty not seen in this world, glowing with the *tajalli* of Allah! Allah O Akbar." And the audience of five thousands roared the incantation of Allah O Akbar three times.

Or take the case of the black Christian pastor who was screeching, "Blessed are the Kings and Queens of Heaven who may also be seen on Earth by the great ocean of Christian compassion! The angels, Ibraheem and Scraphheem, blessed be their souls, fluttered their sacred wings with heavenly music coming out of their fluttering"

There is humour, too, in their speeches at the cost of socialism and communism, and other such concepts like secularism and rationalism but never at the expense of capitalism, *poonjiwaad* or *Sarmayaadaari*! They choose their butts of satire looking at the pot-bellies of their clients—sorry, disciples!

One of them chose the subject of his lecture, "SAMAJWAAD SE SAVDHAAN". It was very popular with the Sethias and industrialists of Bombay who simply loved the saffron-clad one.

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They come to the princely abode of their host in a limousine in which the rear seat was covered by a tiger skin, the God-man's hand carelessly caressing the beast's ferocious (but lifeless) head. The precious foreign-imported limousine was driven by a young female who was assigned this duty by the Sage. She wore a sleeveless *choli* of skin-coloured silk. Or, may be, she was his industrialist host's own daughter doubling for the Mystic's *chauffeur*, and, being fashion-observant, she duplicated her dress, because the Great Spirit had said in so many words that any other *chauffeur* in any other dress would disturb his *Sdhana* and closed-cyelids *dhvaan* (of course, the eye-lids are not entirely closed and every few seconds he squints them open to allow a glimpse of the tantalizing back of the fair *chauffeur*!

When the Great Spirit descends from the chariot (of course, it is not a chariot but a foreign-imported limousine a silver foot stool is placed beside the door of the car from which the sandal-wood *Khadaon* (wooden sandals) of the Great Spirit falls on the red narrow strip of carpet which extends to the lift which is already fragrant with *agar-battees* (incense-sticks) and draped in red velvet which is the Great Mystic's favourite colour.

From the ground floor the lift takes a long time to reach the top terrace, the sick and the crippled are lined up for the Great Spirit's *darshan* on each floor where the lift halts, who have been promised just a second's grace of the Master Spirit's renowned healing glance.

No lip-stick allowed!

Meanwhile, the Great Spirit's saffron-clad Secretary (naturally, a girl of aristocratic lineage) loudly warns the audience that the Great Spirit cannot stand the smell of Soap, Face Powder, Lipstick and Gas passed per rectum, therefore those who are using any of these cosmetics or liable to pass GAS per rectum, should remove themselves from the Great Spirit's nasal range which is calculated to fifty feet of the dais. A few well-scrubbed, well made-up women and two or three fat men got up to be out of range of the Great Spirit's great sensitivity!

Then a temple bell rang to announce that the lift had arrived at the terrace floor after distributing healing glance of grace to the afflicted on twenty-seven floors.

The guessing game

There was a Muslim "healer" reputed for his clairvoyance and therapeutic touch. You did not have to tell him anything except two numbers, one of two digits and the other of seven digits, and His Grace did the rest for you. He also expected you to think of a Flower, the names of three saints, and three dishes which one liked. And he would ask you to write it on a piece of paper which, after elaborate folding-up he would put inside the pages of the Holy *Quran*. Then he would look at you for a few minutes in silence and then proceed to reveal all that was secreted in the folded paper. The trick was that he communicated the name of the flower, three saints and three dishes of your choice (actually *his* choice), while looking at you before you made-up your mind.

So I didn't know why I wrote the names of "Burr Ali Shah *Qalandar*, *Guru* Nanak and Sant Kabir—except that hypnotically he had made me write these names. The rest was simple enough. He assured me that my chronic Cold would disappear in two days—it didn't even after a month. As for the *Cancer* patient, he did not live to make any complaints—he died on the seventh day. When the God-man was asked about it, he said, "I am not God! I told him your troubles are going to be over in a week—and, they *were*!"

You can't argue with a faith-healer! He knows what to say to whom—and when! The simple-minded flock to him in large numbers, offering him seven rupees *nazrana* (offering!) to assist him.

"GOD-MEN" are not very different. Perhaps some of them also take the help of Hypnotism, Mesmerism, Yoga and Tantric tricks, and even gadgets.

"GOD-MEN"—how the name stuck to them, I do not know. Perhaps they were always known as such. But it is definitely of foreign, Anglo-Saxon origin. The hyphenated God-men suggest a hyphenated connection between GOD and Men. It is certainly not a translation of some Hindi or Sanskrit word or phrase—Guru, Sanyasi, Rishi, Maharishi, Sanyasin, Holy Man, Fakir, Dervish, all have different connotations.

"Genuine or spurious, God-men have come to have a mystic halo round their heads—the phrase describes them! There can be no mistaking them—for instance "J. Krishnamoorthi" cannot be called a "God-man" because I don't think he believes in God, nor has he ever mentioned 'God' in his lectures. He would have been a God-man if he had stuck to the destiny that Madame Blavatsky had ordained for him, but he revolted against it."

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"Men of God"?—but all men are "men of God"—certainly the phrase cannot describe such rare species as God-men!

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Money-minded

God-men (specially the spurious ones) are different, though some of them are glib enough to be mistaken for the oratory of Krishnamoorthy! Oratory is one thing—pseudo-oratory is quite another, though often the one is mistaken for the other!

One thing that always characterizes the spurious God-man is his money-mindedness, or success-mindedness which is one and the same thing, because with Success comes in Money and Power! Marble air-conditioned palaces (though they might be called GUFAS air-conditioned for the foreign seeker’s comfort because, after all, he pays for it in Dollars and Marks!), Aeroplanes (though, in the parlance of the Flying Gurus, they might be called Vedantic and Vedic GARUDS), foreign air-conditioned limousines for travels along Indian roads that threaten the chasis at every step. But the grace of the Infinite God protects the Ashram (more like a Palace!) and the vehicles, the same that provide the foreign-donated cars. He who provides also *protects* and *preserves*!

Besides there are other signs of the God-man. He has got a *monastery* (*Ashram* is too common a word!) where, for 25-dollar a day a GUFA can be hired for air-conditioned *dhyaan* of the foreign disciple. Or if he is a *plebian* seeker of Vedantic Truth he can pay 15 dollars a day and stay in the dormitory with five other people—but they will all be foreigners.

A Foreigners’ Canteen is thoughtfully provided by foreign-retained Great Spirit where, for five dollars a meal, he can get a thick steak (over-done or under-done) and a pair of doughnuts for a dollar! Or two

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dollars for Sweet Yoghurt—the food of the Gods! The Monastery (not *Ashram*!) is located at the foot of the Himalayas for the comfort and convenience of foreign disciples—the main concern of the God-man!

God-women

God-woman is the female alternative of God-man! But hitherto no God-woman has risen to the material success or spiritual international renown of a God-

man! But still God-woman is a God-woman, though she is of *Indian* origin and local fame.

There was one God-woman in Central India, who achieved world-wide fame because she got involved in a murder case but when she appeared in the court, she was in the altogether! Stark naked—except for her bewitching smile, she did not have a stitch on her! The shapely youthful breasts were partly covered by her extra-long black tresses, and the vital parts were covered by the flowers in the extra-long garlands that her disciples hung round her shapely neck. She was a sight even for jaded film-photographers!

There are other God-women who are not naked like Truth, but who are dressed more conventionally in white or saffron robes. Some of them have preached (or *screeched*) in air-conditioned Bombay Halls, and undoubtedly they are a big draw.

Packed halls always greet their appearance. There is an appeal (sex-appeal?) in their voices which magnetize the disciples. Their dark tresses (always open to create the *jogan* effect) and, unlike their masculine alter-egos, they are not allergic to strong perfume or smell.

God-child!

And why not?

After all the legends of Lord Krishna are legion... His childhood antics have enchanted hundreds of thousands of women, besides Radha!

There is a God-child who lives in America. He came to India with a large retinue of men, women and young girls to enhance the legends of Krishna and the Gopis!

But soon he had to leave India and return to the hospitable shores of U.S.A., because in India there were more than one scandal, involving something to do with narcotic drugs and breach of Indian Currency regulations.

That was the last we heard of the *God-child*.

But doubtless there are others lurking in almost every district of India, and in the more superstitious ones, there must be more than one!

These are not called *God-children*. But they are venerated like Gods!

They are the proofs of the Theory of Re-incarnation—if proof were needed!

They are supposed to recite Sanskrit *mantras* from their childhood, and remember bits and pieces of their past life—or lives!

They are well-tutored by their guardians to make a fast buck for them. They can make predictions, read *janam-patries*, pray for those in distress or financial troubles. They are supposed to possess certain powers—which make them oblivious to Newton’s law of gravity.

Big broom needed

So these are the *screechers*—the God-men, God-women and even God-children who all spread cob-webs of superstition in our superstition-ridden land.

We will need a very big broom—of Reason and Rationality and Science—to get rid of this ‘dirt’ from our midst! □

As Buddha spoke of these miracle-makers !

Debiprasad Chattopadhyaya

Questioning the basic moral sanction for demonstration of miraculous power, the author says, the earliest to face the question was Gautam Buddha who came out with a striking answer to it. For him, as the author quotes from the Pali Vinaya-Pitaka, it was as disgusting as the prostitute showing off her body for attracting her clients. And Buddha, adds the author, prohibited the trick for his followers.

I shall begin with a simple question. It is concerning miracles, or, more specifically, concerning the demonstration of miraculous power. The way in which the materialists answer it is, of course, well-known. But they are usually branded as bad fellows and trouble-makers, whom it is best for the pious people to avoid.

So let us not reiterate here what they have to say. Nevertheless, the question of miracle remains. Even those who are renowned in history as profoundly pious persons, did find it necessary to raise it.

One of the earliest of them was Gautama Buddha. He did face the question of miracle and of the demonstration of miraculous power. And he came out with a striking answer to it. For him it was as disgusting as the prostitute showing off her body for attracting her clients. He prohibited the trick for his followers.

As told in 'Vinaya-pitaka' !

This is told in the Pali *Vinaya-Pitaka* in which the Buddha formulated the codes of conduct for the monks. His judgement on the miracles comes at the end of a narrative, which is really exquisite for its simplicity. We may as well quote it in brief outlines.

"Now at that time", as the narrative begins, a merchant at Rajagriha acquired a piece of very precious sandal-wood. And the merchant thought : "How would it be if I were to have a bowl carved out of this block of sandal-wood, so that the chips shall remain my property, and I can give the bowl away ?"

So the merchant had a bowl turned out of that block of sandal-wood, and put it in a balance, and had it lifted on the top of a bamboo, and tying that bamboo at the top of a succession of bamboos, he declared : "If there be any saint possessed of miraculous power, let him get down the bowl. It is a gift to him."

A number of persons renowned for wisdom went, one after another, to the merchant and asked for the bowl. The merchant told each of them : "If, sir, you are a saint possessed of miraculous power, let your reverence get down the bowl". But none of them could get down the bowl.

Now at that time, two of the Buddha's close followers went to Rajagriha in the usual round for collecting alms. One of them was Maha Moggallana, the other Pindola Bharadvaja. Both having been saints and possessed of miraculous power suggested to each other the proposition of getting the bowl. Eventually it was agreed that the latter was to have it.

Then the venerable Pindola Bharadvaja, rising up in the air, took the bowl, and went thrice round Rajagriha

in the air. The merchant with his wife and children, saw him in air and begged him to descend on his dwelling place. When he came down, the merchant filled the bowl with costly food and presented it to Bharadvaja. With this, he proceeded to the camping ground of the monks.

He was followed by a large number of men who, amazed by his performance, were shouting loud and long. The Buddha heard them shouting and asked Ananda what did all this mean. Ananda told him

"You are not, oh monks, to display before the laity the superhuman power of miracle. Whosoever does so, shall be guilty of an offence. Break to pieces, oh monks, the wooden bowl, and when you have ground it to powder, give it to the monks as perfume for the eye ointment."

about Bharadvaja acquiring the merchant's bowl with the aid of his miraculous power.

And the Buddha rebuked !

Then the Buddha, on that occasion and in that connection, convened a meeting of the brotherhood of monks, and in the meeting asked Bharadvaja whether all this was really true. The monk admitted that it was so.

Then the Buddha rebuked him, saying : "This is improper, Bharadvaja, not according to rule, unsuitable, unworthy of a monk, unbecoming and ought not to be done. How can you, Bharadvaja, for the sake of a miserable wooden pot, display before the laity the superhuman quality of your miraculous power ? Just, Bharadvaja, like a woman who displays herself for the sake of a miserable piece of money, have you, for the sake of a miserable wooden pot displayed before the laity the superhuman quality of your miraculous power."

And when he had rebuked him, and had delivered a religious discourse, he addressed the monks and said: "you are not, oh monks, to display before the laity the superhuman power of miracle, whosoever does so shall be guilty of an offence. Break to pieces, oh monks the wooden bowl, and when you have ground it to powder, give it to the monks as perfume for the eye ointment."

So that is what we read about the Buddha in one of the earliest and most authentic of the Buddhist canonical texts which the Pali *vinaya-pitaka* certainly is.

Whether the Buddha believed in the actual possibility of attaining miraculous abilities is not the point of our discussion. Evidently enough that is not the point of the discourse either. The narrative designed to introduce the Buddha's sermon takes no doubt the possibly for granted. But the real purpose of the narrative is quite different. It is to illustrate the Buddha's attitude to miracle-making. The question posed in it is basically an ethical one. Even admitting the possibility of attaining supernormal powers, how far are the monks morally justified in making a show of it in demonstrating before the public the capacity for super-normal performance ?

The sum

vague about his own answer to it. From the view point of the conduct of the monks, i.e. from the standpoint of morality as he wanted it to be practised by his closest disciples, it is indeed a serious offence. And it is also stinking, specially because the demonstration of the miraculous performance is generally intended to ensure some material benefit for the performer. That is why the Buddha compared it to the woman exhibiting her body just for the sake of a few coins. That is why the Buddha wanted the precious sandal-wood bowl to be smashed into dust though, wisely enough, also recommending that the dust could as well be used for medicinal purposes. Evidently, he had nothing against the sandal-wood dust itself which could be obtained, and, as a matter of fact, was obtained, by the brotherhood of monks by other methods, as is evident from the long discourse of the Buddha on medicaments embodied in the *Vinaya-Pitaka*. But that is a different point altogether which hardly concerns us for our present discussion.

Now the question is...?

We are ourselves separated from the Buddha by over two thousand and five hundred years. Much that was part of the accepted folklore of his times have ceased to have anything more than historical—and perhaps also anthropological—interest. What, nevertheless, continue to be profoundly important for the contemporary context are the essentials of his teachings. The Buddha is not really dead for us. That is why, so much is made today to be clear about his message.

The modern scholars are perhaps yet to be unanimous about all aspects of his teachings. Nevertheless, what is simple and direct about his moral views cannot be missed: there is often a piercing clarity about it. At any rate the one we have just quoted has this quality.

It has moreover a very direct bearing on our own problems. We have some practising God-men in India today. They want to create an awe among the

"And it is also stinking, specially because the demonstration of the miraculous performance is generally intended to ensure some material benefit for the performer. That is why the Buddha compared it to the performance of the woman exhibiting her body just for the sake of a few coins."

people with demonstration of their miraculous power. There are also attempts no doubt to expose them as sheer charlatans, with certain amount of the jugglar's tricks. For the present, however, I shall raise only one question about them. It is the question of the basic moral sanction for their performances. If we agree to learn from the teachings of the Buddha, we can hardly see any such sanction. Or the sanction is there only in the sense in which it exists for the prostitutes showing off their bodies just for the sake of a few coins. □

Business men

Business is dirty business !

Mohit Sen

So puts the author, "It is in Monsieur Verdoux that Charlie Chaplin makes one of his grand and enduring statements. When a prostitute is shocked by the methods used by business men to get on, the maestro simply tells her, 'business, my dear, is a dirty business'! That just about sums up the whole business !!!".

THERE IS A REVIVAL of interest in the films of Charlie Chaplin. But so far in India two of his masterpieces have not been screened again. One is *Limelight* where his genius lifts what is a common theme of the decay of age to the level of tragic sublimity. The other is *Monsieur Verdoux* which is a sharp and cruel satire on the essential thrust of capitalism—the poison of profit.

It is in *Monsieur Verdoux* that Chaplin makes one of his grand and enduring statements. When a prostitute is shocked by the methods used by business men to get on, the maestro simply tells her, "business, my dear, is a dirty business"! That just about sums up the whole business! !

Readers would remember certain other celebrated statements on the same theme. You have the French socialist Proudhon who startled readers in his days by declaring "All property is theft". Balzac was even stronger when he wrote "Behind all great wealth there is great crime". And, of course, there was Marx who in *Capital* wrote that a French writer had said that money comes into the world with a congenital bloodstain on its cheek. Marx added that capital comes into the world covered from head to foot with blood and dirt.

The "small" getting big !

In a certain sense and speaking personally one grew up in an atmosphere where this approach or orientation was part of the air itself. But that it was not the romanticism of youth one discovered in the otherwise sobering reality of living and working in free India. One saw and even experienced how some "small" people became big and heard what the modern executives had to recount about the exploits of their masters.

There was a neighbour who began by cycling from home to work and to friends. Then he was able to latch on to the "milkpowder gift" racket. In a few years he had two houses and drove around in a repainted Mercedes. Looking around one discovered that he was not by any means unique. While he was on the climb and thereafter also he would be derided but acceptance and respect also came with each higher rung of the ladder.

There was a sensitive manager who headed the outfit of a very modern and Westernised big business house in one of our metropolises. The name of game there at that time was "premature voluntary retirement" of the employees so that modern sophisticated office equipment could be installed. The manager was upset by the obvious distress of many employees passing into the middleaged years. But just in case he became sentimental a telex message came from the supremo at headquarters. It told him to remember that as human employees grew older in service they became more expensive while machines became cheaper with the years thanks to depreciation ! So in the interests of the company sympathy had to go along with sacking !

This is also not an isolated instance. Anybody who knows anybody who is anybody in business concerns of whatever shape and size would be able to replicate this experience.

This cutting of corners and treating of human beings as objects from whom surplus has to be extracted is the mode of existence of the business species-being. This was so in the past and is so now. This is so in California and it is so in Manipur.

Historical perspective !

But what has changed in the historical context. However distressing and disgusting such mores may be for any decent being, there was a time in history when the bearers of this approach to life and living were the masters of production. They were the chief

"And has not Chalapati Rao put it on record that one newspaper magnate told him that he had committed every conceivable crime. 'Even murder ?' the then Chairman of the first Press Enquiry Commission enquired. But came the reply, 'the spirit was willing but the flesh was weak !'"

organisers and protagonists of an unprecedented advances in not only material production, they were the leaders of revolution in thought ranging from scientific discovery to democratic political processes. In the first flush of their historical emergence their peak-level representatives were men of incredible energy and universality of interest. It is an irony of history that the most inhuman of all social formations, and classes also were the original creators, practitioners and propagandists of humanism. Even at that time there was a *Lakshman Rekha*, a line of limitation and constriction to all this. And that was the pursuit of profit and the defence and spread of the system based on it. Hence, for example, the slave trade. Or in our country, the cutting of the thumb and forefingers of the weavers of Dacca muslin.

This did not last too long if one goes by the historical time scale: Its very contradictions produced its opposite in the shape of an ideology and movement—socialism. And since 1929 when, as Jawaharlal Nehru wrote to Indira Gandhi at about that time, there came a new magic word—planning—from the country of socialism. The significance of this magic was that it was precisely an alternative to the so-called magic of the market place. It was an alternative method of economic development with an alternative ethos. It was the future and it worked. And the socialist movement from a theory became an experiment in social development and then a success story. With that ended history's debt to the species-being whose private vices had been something of public virtues.

India's tragedy !

In India the tragedy for our country and also for our business men is that they came to maturity precisely at a time when on the world historic scale their species-being had become not only obsolete but an obstacle. Their methods were not only played out but a throw-back. And before they could cut their umbilical cord which connected them with feudalism they had acquired the sclerosis and even senility of mono-

poly. Before, as it were, they could begin to learn the ways of profit through exploitative production they had acquired the taste for profit on alienation. They had not given up moneylending when they took to speculative cornering of stocks. Yet they hung on and still hang on. Yet the myths of their indispensability and superiority are spread.

Jawaharlal Nehru was amazingly accurate when he said decades ago that the socialist way of development is the only way for India's progress. This was not because he was personally attracted to the ideals and civilisation of socialism but because there was no other way of what is at times called growth with social justice. The mixed economy certainly gave room to the business men and their houses. But they have not used the space provided. What is more they have betrayed the trust reposed in them to act as pace-setters, and innovators.

The 'stubborn' things !

ONE

Let us look at the facts which, as once Stalin said, are stubborn things. One of the important "contributions" that the business men have made to India's economy is the spread of sickness of industrial and commercial enterprises. Who are the owners of the 'sick' units which the government has to take over ? Is it not a fact that life insurance and general insurance companies had to be taken over because the private owners were simply playing ducks and drakes with the life-savings of the middle classes ? Is the experience with private financial saving institutes any better now ? Is it not a fact that there was literal slaughter of the coal mines and coal miners which made nationalisation indispensable ? What about the textile mills' land being more of an asset than their productive equipment ? Where else in the world have powerlooms vanquished factory production ? But a wonderful part of the scenario is that it is the industries or enterprises which turn sick—the owners remain healthy and move on to fresh pastures.

"This cutting of corners and treating of human beings as objects from whom surplus has to be extracted is the mode of existence of the business species-being. This was so in the past and is so now. This is so in California and it is so in Manipur."

TWO

From "sickness" let us pass to the less fevered area of simple cheating. Many in the higher realms of authority are often inclined to flaunt the certificate doled out by the World Bank testifying to the health of our economy and the efficiency of their managers. But what about the World Bank study which has given us the proud privilege of being the country with the largest amount of black money in the world ? It is estimated to be around Rs. 40,000 crores ! What about the previous Finance Minister Chavan's outburst of

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two parallel economies in India—the official and the black money one? What about the present Finance Minister's uncontested charge that some thousands of crores of taxes due are simply not paid through the device of litigation? What about the fraudulent use made of the provident funds of the workers and employees? What about the fact that *benami* has become the synonym for business in India.

"In India the tragedy for our country and also for our business men is that they came to maturity precisely at a time when on the world historic scale their species-being had become not only obsolete but an obstacle. Their methods were not only played out but a throw-back. And before they could cut their umbilical cord which connected them with feudalism they had acquired the sclerosis and even senility of monopoly."

THREE

From cheating let us pass to the "legitimate" use of state funds to build one's own empire along with one's dynasty. The editor has insisted on banning the use of names. So let my examples remain unnamed though, perhaps, not unknown! But leaving all the other aspects apart why this fuss and furore about the LIC exercising its simple right as a shareholder? Was not Prime Minister Indira Gandhi perfectly right when she said that in India private enterprise is neither so private nor so enterprising? What should be added is that they are quite enterprising in thriving on the funds of the public exchequer! What needs much more probing is how they are able to attract such funds.

FOUR

We can go on from here to making profits by restricting production. Are not shortages artificially created? Why otherwise, for example, do the newspapers carry the announcement that the government is releasing more sugar from its stocks so that private business would unload stocks that it is hoarding? How much better it would have been for private business if production had so drastically declined that the government had no stocks to unload? There are more cruel examples like lifesaving drugs not being available because the production of sometimes useless, sometimes harmful brand name formulations are more profitable to produce. Here our business men are only imitating their

counterparts in other countries. Do we not have reports of some governments giving subsidies to restrict production? Are not oranges thrown into the Pacific Ocean in California, coffee beans burned in Brazil and butter stored to rot in caves in Europe?

FIVE

The Vivian Bose report

Then comes the practice of giving perks and jobs not to the boys in general but immediately to one's intimate family circle. Here one would advise readers to look up the Vivian Bose report on the Dalmia Jain group of companies. The learned Judge gave the following example. He stated that once when a new company was started a well-known promoter made his seventy-year-old mother its chair-person. Naturally the old lady appointed her son as the managing director. But as the company began to move to failure what did the now even older lady do? She dismissed her son from the managing director's post. Justice Bose thought this unnatural. But on deeper investigation he found that gratuity, compensation and the rest gave the sacked son a rather large nestegg. The learned Judge acidly commented that in general it is profitable to be employed but in the case of Indian Business it was evidently more profitable to be dismissed!

SIX

Finally, about the methods used not only against outsiders but one's own family when it comes to making

"What about the textile mills' land being more of an asset than their productive equipment? Where else in the world have powerlooms vanquished factory production? But a wonderful part of the scenario is that it is the industries or enterprises which turn sick—the owners remain healthy and move on to fresh pastures."

yet more money. Shyam Benegal did a creative work but did not produce a fantasy in his *Kalyug*. Those who doubt it can go to certain exclusive areas in Ahmedabad, Bombay or Madras. And has not Chalapati Rao put it on record that one newspaper magnate told him that he had committed every conceivable crime. "Even murder?" the then Chairman of the first Press Enquiry Commission enquired. Pat came the reply, "the spirit was willing but the flesh was weak!"

That just about sums up the matter. □

"Was not Prime Minister Indira Gandhi perfectly right when she said that in India private enterprise is neither so private nor so enterprising? What should be added is that they are quite enterprising in thriving on the funds of the public exchequer! What needs much more probing is how they are able to attract such funds."

Profiteering is their sole business !

Kamal Nayan Kabra

Tracing the growth of Indian business and business men in the past few decades, the author opines that "generators of black economy and cultural nihilism and preservators of politics who make a religion of self-aggrandisement cannot be agents of social transformation towards a better and healthy tomorrow. A reading of all the resolutions and by the organised business, even by an undergraduate, will unmistakably point out that all that they want is a little more of private profits."

BUSINESS CLASSES OCCUPY an important and powerful place in the socio-economic system obtaining during the post-independence era. This era is both a product of history and a result of conscious choice made by the framers of the Constitution insofar as the right to property was made a fundamental right and nationalisation on a large scale and without fair compensation was ruled out. It means the place occupied by the business classes during the last four decades or so is both a historical legacy and a conscious choice made by the powerful elite. Given the Indian situation, the masses had no option but to acquiesce in it. The endorsement, in successive electoral battles, of the regime which clearly and loudly accepts, acclaims and implements such a role-assignment for the business classes, is more the effect of this socio-economic system than the cause of it.

A class all-powerful !

Be as it may, in no historical epoch did the Indian business classes (right from the village retailer and artisan to the top echelons of industry and commerce) controlled and commanded such an extensive sphere of economic activities, such a large-scale direct control over productive assets and such a powerful and tight hold over the reigns of social, cultural and political power as they do under the 'sovereign, secular, socialist Republic of India' which emerged as a political nation in 1947. An index of the extensive range of economic activities which are directly under the command of the business classes can be seen in the obliteration of the distinction which existed between the farmers (kisans) and the business men (banias). Today all farmers save the marginal and small farmers, have become, analytically and functionally, business men and only the cultural imprints and fond memories of farming as a way of life (rather than a business proposition) are surviving. Thus except for the public sector (accounting for over 20 per cent of Gross Domestic Product), and the small and marginal farms sector and other household producers, all the rest of economic activities are directly under the thumb of business men. This does not mean that the power of the business men does not affect either the public sector or the household production sector which are linked in many ways to private business sector. No wonder there has come about an eclipse of other classes from the firmament of power, privilege and influence as a result of which the others are basking in reflected and derived glory.

Naturally, the survival, growth and performance of the present system depends, to a mighty extent, on the performances, dynamism, sense of social and historical responsibility and motivational pattern of the business classes.

It may be pertinent to point out that all along we have been speaking of the business classes in plural. This is in defence to the extremely fine degree of

based and economic activities-based mosaic of diversities which are the hallmark of India's business classes.

No less diverse are the roles which the present social system assigns to India's business classes. This role follows from what has come to be called the 'mixed economy' is a misleading one inasmuch as it has no specificity and can be applied to almost every economy in the present day world. However, according to the Indian model, the business classes got an

"In assessing the actual behaviour of the business classes, it is critical to bear in mind the fact that in a very big way, if not unanimously, the business classes were happy with their role and the context of the role they were given in the post-independence era."

extensive role to play which was notionally circumscribed by the schedules A and B of the 1956 Industrial Policy Resolution. Even here - the business classes attracted a serious handicap insofar as an extremely high degree of flexibility marked the implementation of the 1956 Industrial Policy.

The theoretical base

What was expected of India's business classes in implementing India's strategy of development, a development which was conceived largely in economic terms? Before we come to this question, it may be worthwhile to briefly refer to the theoretical foundations of the role which business men play in economic and social life of the countries organised on the basis of private enterprise. It was argued by the Father of the Science of a private enterprise economy Adam Smith, that it is not because of the benevolence of the baker, butcher and brewer that we obtain our supplies of bread, meat and wine. It is their self-interest as business men which makes them bring forth the supplies in order to meet the wants of society. It is this correspondence between the business men's pursuit of self-interest and the society's needs for various commodities which provides the basis for organising social life on the basis of business men's enterprise.

This capacity of business men, apart from its basis in the structure of the economy, was thought to be derived from what has come to be called their "entrepreneurial" function. Entrepreneurship, a little analysed category in sharp contrast to its critical significance, is said to be related to various activities like adventure, inventions, innovation, perception of unexplored opportunities, risk-bearing, exploration, management, organisation, etc. by economists like Cantillon, Schumpeter, Hirschman, Kirzner, etc. Either he is engaged in what Schumpeter called creative destruction, or acts as an agent of equilibrium. Ranging from the merchants who buy and sell over distant places and periods of time to those who intro-

the entrepreneurs are expected to steer the economy in the directions required by social needs. Whatever the tasks, their motivation remains rooted in self-interest, which may get manifested in various ways, as modern theories of firms show.

It is not relevant for the present purpose to refer to various criticisms of these entrepreneurial functions of business men. They generally relate to the motivational pattern and the structure and organisation of economic activities which interrupt and/or rupture the emergence of a spontaneous correspondence between the fulfilment of social ends and individual decisions. These views also turn out to be defective because they ignore the dynamics of social change and the changing distribution of social power. As a result, the entrepreneurial functions of business men become dependent on command over resources and control over levers of power. As such resources, get concentrated and business oligarchies emerge.

The expectations !

In India, the business men were expected to bridge the gap between our productive potential and its rather low level of actual utilisation. They were expected to be important component of the engine of growth, of course, added and regulated by the State. In this process of ushering in the growth, they were expected to diffuse higher levels of productivity through reinvestment, resource mobilisation, technological upgradation and import-substitution. Their R & D efforts were expected to put them on par with other dynamic groups of business men in countries generally considered developed. In this process, they were expected to generate additional employment opportunities at a fair wage rate and accept the fiscal discipline of contributing a part of their surpluses to the State exchequer for bringing about an ex post facto correction of initially strengthened inequalities. Their reinvestment, employment generation and tax contribution roles were to initiate a process of trickling down of the benefit of growth in order to enable

"Without alluding to many a change which became their lot, it can safely and, one presumes, incontrovertibly, be maintained that there is hardly any other group of persons in India which became as well off as the business men during this period."

economic growth (in the form of expansion of the home market) to lay down the foundations of social development.

Using their resources, managerial and technical competence, they were to act as trustees of social resources as could well be expected of people who grew under the shadow of the Mahatma. As the head of a leading organisation of business men said the other day in the course of a Luncheon hosted in honour of the Duke of Edinburgh, "We sincerely believe that what is not in the interest of the society as a whole

can never be in the interests of the organised business as such." Similar were the expectation of the leadership which enjoined upon the business classes crucial responsibilities in the sphere of a thorough transformation of Indian economy and society.

The essence of the hopes !

The essence of this expectation consisted of the understanding that a poor nation can only redistribute poverty, which is hardly desirable. Hence it is essential to rely upon those who have resources and competence to bring about a sustained and sizeable increase in national income. Apparently, once the barriers and vicious circles of poverty and dearth of management-technical skills are broken, we would be able to distribute not poverty, but riches. It is apparent that without assuming such a political and economic behaviour from the business classes as would not stand in the way of a later day restructuring in the direction of a mere just and egalitarian society, the model of mixed economy would not be able to stand on its feet. Needless to say, such a politics as would not succumb to centralising economic power was also assumed. Therefore, on the one hand was assumed a business class acting on the basis of Gandhian Trusteeship. On the other hand was assumed a breed of politicians and a kind of politics capable of steering clear off the power of the lucre, filthy or not-filthy.

The conflicting evidence !

In view of the role public policy assigned to the business-men of the country, it may be asked whether there was enough evidence that they had the capacities to prove themselves equal to the task. As far as the question of actually demonstrated capacities is concerned, one comes across conflicting evidence. A large number of new modern large scale productive ventures were successfully initiated by Indian business men and, by and large, they made a success of whatever they undertook. However, the sweep, range and intensity of new business ventures could not galvanise the Indian economy into an industrial giant

"The basic assumption that politics is above and independent of business and hence the former is capable of forcing the social will and objectives on the latter (whatever its philosophical basis) has been falsified by Indian experience."

commensurate with her potential. This was, however, attributable to the ruinous and plunderous role played by the British business classes through their political hegemony over India. As a result, during the early colonial era, by finishing off a thriving and vibrant artisan economy, the well-springs of the growth of a dynamic business class were dried up. Not only that, by reinforcing its advantages of early start through the 'use' of blatant political coercion a large number of economic activities which had a good potential of diffusing new technology and forms of business organisation, and creation of sizeable employment opportunities and of local innovative capabilities,

who operated them against the interests of Indian industrialisation. Such a growth was more than counterbalanced by the stifling of Indian business classes. Furthermore, denied of the legitimate avenues of growth in their own domestic setting, Indian business classes devised means of seeking opportunities either under the protective wings of foreign capital or in various devious ways. Thus if there was lack of fast expansion of India's business classes it was

"Symbolism of politics and business is bound to lead to a most pernicious concentration of economic and political power. Apart from being injurious to the interests of the great majority of the poor masses, such a combination of power also hinders the growth of relatively smaller business men."

considered an effect of unjust and unequal 'competition' provided by the business men from the ruling nation and its allies.

The alien influence !

The inhibiting and distorting effects of the dominance of British business men were realised by Indian business men. They made attempts to undermine the position and power of foreign business men and carve out a niche for themselves both in business as well as in political and cultural fields. The power exercised by Chambers of Commerce dominated by the foreigners not only aroused their envy and challenged their self-respect, but also provided a model of the future they would like to work for. Thus by adopting mimetic practices concerning political mobilisation lobbying, financial manipulation, organisational forms like the managing agency system and managerial skills, certain groups of Indian business men tried to forge ahead. Unfortunately, the size of such business classes could not become commensurate with the size of potential human and raw materials availabilities in India. A narrow class of modernising business classes, fully aware of their economic and political potential and striving to realise it, emerged. The emergence of a pyramidal, narrow top of business men was also attributable to the built-in depressions operating in the Indian economy owing primarily to external rule and dominance

Thus under the combined impact of the power of foreign and Indian big business, a vast business class, largely homogeneous with roots in productive activities like farming, artisan, production etc. could not emerge. Being firm allies and henchmen of the alien rulers and sharing the plunder of India's resources with the foreign rulers, the Indian feudal lords and kings were unlikely to find incarnation in the form of business classes. Thus prior to independence the size of business classes could not become large enough to usher in an era in industrialisation. The mercantile and financial elements remained strong in the relatively small sized business classes, a trait which still lingers.

to emerge, prior to independence both as classes-in-themselves and as classes-for-themselves, who could arrive at a broadly unified class approach to issues of economic, financial, tariff and other policies. They also showed a high degree of professional competence in reconciling their day-to-day adjustments with the foreign rulers essential for current survival with the development of a high degree of rapport with the nationalist leadership spearheading the freedom struggle (an essential condition for future growth).

"Multi-dimensional growth, diversification, strengthening and changed mode of functioning of Indian business classes owe considerably to political process. A 'successful Indian business man is as much as economic financial and technological entrepreneur as he is an astute manipulator of the political-administrative processes."

They successfully influenced, to a certain extent, the economic and financial policies of the British rulers and in various ways developed close links with the freedom struggle. These historical traits demonstrated by India's business classes played their part in winning for them a big role in rebuilding a prosperous, new India through planned social efforts.

The post-independence era

The immediate post-independence era saw the evolution of politics and perspectives based on the assumption of a broad national harmony, reconciliation and mutual complementarity among basically conflicting interests. Naturally, the foresighted segment of the business classes could not have wished it differently. In assessing the actual behaviour of the business classes, it is critical to bear in mind the fact that in a very big way, if not unanimously, the business classes were happy with their role and the context of the role they were given in the post-independence era.

The contribution of business classes during the last four decades must be seen as a part of the performance of the so-called mixed economy model. The first striking thing which happened during this period is the growth of business classes in terms of their numbers. This was a multi-faceted phenomenon which could be seen in terms of scale and variety of businesses, use of higher and sophisticated levels of technology, adoption of newer and more organised forms of business and abandonment of some socially undesirable form of organisation and management like the managing agency system. They also acquired wider regional spread, though their ethnic origins did not show a matching diffusion. Of course, the range of commodities and services produced by them increased greatly with the green revolution giving them an unprecedented foothold in agriculture. Modern management principles and practices also came in for wider application, though in agriculture, land ceiling laws kept the corporate firm out.

pre-organised into various associations and chambers of commerce and did not hesitate to use agitational methods when their interests demanded it. Despite the persistence of hereditary succession, more education and technical training were obtained by the sections of business men. International business, technical, political, professional, ideological and cultural linkages of the business men were extended and deepened. Fear of and hostility towards foreign capital was largely replaced by co-operation and mutuality.

By and large, all the segments of our highly differentiated business classes improved their economic and social position over the period. Many had to forgo their traditional callings or conventional methods of running them. Such groups had, at times, to undergo a painful process of readjustment but once the teething troubles were overcome, they became measurably better off. Without alluding to many a change which became their lot, it can safely and, one presumes, incontrovertibly, be maintained that there is hardly any other group of persons in India which became as well off as the business men during this period.

What evidence proves !

The relative improvement in the position of business men is at times and in certain quarters contrasted with that of politicians and bureaucrats, with a view to suggesting that the latter may have become still better off. I am not aware of any systematic study dealing with this issue. However, indirect evidence and a priori reasoning suggest a few things !

ONE

Firstly, as the direct controllers of assets and decision-makers, the business men would derive greater financial gains than politicians and even the combined "contribution" of all the business men would hard-

"These capital and foreign exchange intensive goods, based on imported technology, foster consumerism and imitative life styles. They encourage further skewed distribution of income and wealth. The spread of values of consumption and acquisitive society impede the processes of social transformation as they become instruments of co-optation."

ly be a match for the combined surpluses obtained by the business men.

TWO

Secondly, once a regular system of cuts and kick-backs comes into operation, it is not very logical to treat business men and politicians as though they belong to two separate watertight compartments. *Benami* business is nobody's exclusive preserve and given our extended family system, sociological links come handy to enable politicians to run business. Accumulated funds must, after all, enter business.

Just as business men have come in large numbers into politics (particularly, owing to big farmers becoming business men), a large number of politicians have directly, indirectly (through members of a common household) and through benamis entered business. It is a pity that much researches have not been done on this issue.

THREE

Thirdly, to quite a large extent business has partaken the features of politics and politics has become quite a bit of business. Not only the practice concerning financing politics and elections and treatment of 'political' contribution as a variety of 'investment', which have become common to most political parties and business men of substantial standing, but the methods of regulation, control and encouragement of private economic activities and fiscal and monetary policies contribute to pulling down of the fences separating business and politics from each other.

The symbiotic relationship

As a result, a symbiotic relationship has come to obtain between business and politics. Any appraisal of what the business has done for the nation must be based on the current *modus operandi* of business in relation to political and administrative processes. However, essential, inescapable and a desirable a controlled business system, the manner in which it has actually operated has brought about a firm alliance and symbiosis between business and politics. The debate over alternative methods of control, regulation and encouragement of economic expansion would remain more shadow-boxing until priority is assigned to changing the axis of social power represented by the symbiosis of business and politics. The basic assumption that politics is above and independent of business and hence the former is capable of forcing the social will and objectives on the latter (whatever its philosophical basis) has been falsified by Indian experience.

The Indian variant of business men-led market model of accumulation, supported by a plan model

"The non-acceptance of the logic of and alternatives to doing away with plunderous and inequitous primitive modes of accumulation by the business classes inhibits ploughing back of their surpluses into socially approved channels."

of public accumulation was designed to avoid the excesses, injustices and heaping of hardships on the masses (under various primitive accumulation models) following from democratic human rights. Relative autonomy of politics from business and acceptance of the rules of the game by business men were essential prerequisites under our post-Independence model for the emerging reality in India to be a mirror image of the chosen futures in which justice—social, economic and political shall inform all spheres of life and there will be no concentration of power to the common detriment. One may have genuine doubts whether such pre-requisites could ever be met. Symbiosis

pernicious concentration of economic power. Apart from being injurious to the interests of the great majority of the poor masses, such a combination of power also hinders the growth of relatively smaller business men. Given India's size of unemployed manpower, adverse land-man ratio, capital requirements of imported technology and its limited employment potential, our 'mixed economy' model can hope to produce more employment opportunities,

"What was brought out by many commissions of inquiry into the affairs of many business groups, or the reports of government auditors into their finances and accounts, or the findings of successful prosecutions of tax evaders only show the tip of the iceberg. In fact, there is reason to believe that, these accounts represent the 'normal' business practices of the day."

reduce structural retrogression (i.e. increase in the relative share of the secondary sector in national income without a corresponding change in favour of the secondary sector in the occupational structure) and bring about a somewhat better diffusion at the fruits of growth only if there is a massive growth of small scale, cottage and artisan industrial enterprises. The cementing together of business and political power leading to a formidable concentration of power is preventing such a phenomenon from taking place.

Failing the nation !

Following from the above, it is not very difficult to see how the business classes have failed the nation. Since the facts concerning economic change and growth are well-known, I am not going to make this essay laden with statistics. Multi-dimensional growth diversification, strengthening and changed mode of functioning of Indian business classes owe considerably to political process. A 'successful' Indian business man is as much an economic, financial and technological entrepreneur as he is an astute manipulator of the political-administrative processes.

The outcome of such a system of business has changed the Indian society both in quantitative and qualitative dimensions. In a comparative historical sense, there is evidence that the days of stagnation were ended and we achieved a sustained expansion of economic activities at a rate not known at least over the last three centuries. We have had a good deal of import-substitution. Modern industry, trade and services have reached many areas for the first time. Millions find themselves in an improved position, though many more millions have suffered either a relative or an absolute decline.

This brings one to the question of pattern of 'development' fostered in our midst. The commodities whose production was appreciably stepped up by our business men, except for wheat and rice, are largely non-wage goods. Even for additional wheat and rice, we had to forgo coarse grains, pulses and oilseeds. Per capita availabilities of most other articles of mass consumption have not picked up or have even declined. But we produce a whole arsenal of goods for non-

productive consumption by a better-off and shrinking minority. These capital and foreign exchange intensive goods, based on imported technology, foster consumerism and imitative life styles. They encourage further skewed distribution of income and wealth. The spread of values of consumption and acquisitive society impede the processes of social transformation as they become instruments of co-optation.

Owing to collaborationist attitudes and practices, our business men have failed to generate technologies based on indigenous resources endowments, local needs

"The growth of disparities, which have denied so far the potential of removing most demeaning poverty and balanced regional spread of the socio-economic benefits, owe considerably to the deeds, misdeeds and absence of deeds on the part of our business men who control the great bulk of our resources."

genious and cultural pattern. Socio-economic imperatives of employment generation, expansion of home market by ensuring jobs at gradually rising levels of productivity for a large number (rather than capital-goods based quantum jumps in productivity for a few) have also remained neglected by the technological choices exercised by the business men. Even in these areas, chosen by the business men, we lag behind the countries we obtain technologies, finance and enterprise from. Perhaps inevitably, as no races are now on borrowed crutches. Their own consumption standards get perverted and owing to predominance of hidden, black incomes in their hands, a vulgar luxury consumption mania has gripped them.

The non-acceptance of the logic of and alternatives to doing away with plunderous and inequitable primitive modes of accumulation by the business classes inhibit ploughing back of their surpluses into socially approved channels.

And the black money !

The entire phenomenon of the black economy, which brings our business circles in the ambit of lumpenisation is the result of the pursuit of self-interest in a crass partisan manner, falsifying the premises of our 'mixed economy' model discussed earlier. The corporate device has become a means for fattening private purse at the cost of the investing public, public exchequer and public financial institutions. What was brought out by many commissions of inquiry into the affairs of many business groups, or the reports of government auditors into their finances and accounts, or the findings of successful prosecutions of tax evaders only show the tip of the iceberg. In fact, there is reason to believe that these accounts represent the 'normal' business practices of the day. The exposed cases either show the failure of these business men to follow the eleventh command ("don't get caught") or was the result of business rivalries which some politicians capitalised in order to win progressive credentials for themselves. And yet rulers can be seen rubbing shoulders with their business magnates inaugurating their 'philanthropic' deeds, financed out of tax-concessions or corporate moneys. Of course, fund col-

lection from them cannot be seen, so openly as it is not through proper party channels any longer.

The growth of disparities, which have denied so far the potential of removing most demeaning poverty and balanced regional spread of the socio-economic benefits owe considerably to the deeds, misdeeds and absence of deeds on the part of business men who control the great bulk of our resources. The maldevelopment and dependency fostered by the business groups have shattered the fond hopes of operating a trusteeship model.

The continuous growth of the power of the rich has attacked a far more precious, even though non-material, thing called the psyche of faith in the hearts of most people, particularly the poor, that during their life time, they, (i.e. The great segment of humanity) will be able to overcome poverty and degradation. The power of the rich (a term which has become almost synonymous with the business men) has subjugated the cultural arena too. Their control over media (newspapers, cinema, publishing etc.), literature (awards, publishing, patronage), massive deployment of advertising, their sway over religious, caste and other divisive fora, their encroachments into educational and academic fields, breed and strengthen cultural patterns full of depravity and against the spirit of scientific inquiry, social change and innovations.

To think that without doing basic rethinking about the assumptions on which the role of the business men

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was based our mixed economy model can be made to work is to behave like an ostrich. Generators of black economy and cultural nihilism and preservers of politics who make a religion of self-aggrandisement cannot be agents of social transformation towards a better and healthy tomorrow. A reading of all the resolutions and memoranda by the organised business, even by an undergraduate, will unmistakably point out that all that they want is a little more of private profits. Their assumption seems to be that what is not in the interests of organised business can never be in interests of society as a whole. Such a single-minded pursuit of self-interest cannot at the same time produce socially desirable outcomes by the invisible hand. Let there be a thorough scientific investigation of the role, motivation, behaviour and dynamics of the business classes in India, in order to show the validity of the role given to them, lest our model be accused of ideological commitment to the power and privileges of the property-owning business classes. If our arguments so far are valid, the business class have failed to live up to the expectations of the nation and there is little chance of any improvement of their performance during the days to come. □

The hollowness of these purveyors of truth !

Khushwant Singh

The distinguished journalist in this short but interesting piece, narrates some 'true' personal experiences to expose the dirty doings of pressmen who, in collusion with newspaper proprietors and politicians, 'prostitute their pens for money' and feed the poor reader with all that goes with misinformation. And yet, he adds, they love to be known as the purveyors of the truth.

I HAVE BEEN A JOURNALIST for over 30 years of which for the last fifteen I was an editor of some journal or the other, starting with *Yojana*, going on to *The Illustrated Weekly of India*, New Delhi and ending with *The Hindustan Times*. Before I knew much about the profession, I used to say that I had the misfortune to be in a job where no one thought me worth bribing because I had nothing to give them in return. All the bribes I received for accepting articles were a smile from a pretty girl whose poems I published, invitations to dinners and at times a bottle of Scotch at Diwali or Christmas. These I did not regard as bribes because they did not in any way corrupt my judgement about articles sent by their givers and I unhesitatingly rejected those that did not come up to the mark. My logic was somewhat Punjabi; one bottle of Scotch is a gift, a crate of Scotch is a bribe. In any case, since I did not consider myself

worthy of being bribed, I regarded myself in the same light as most Englishmen do their own journalists:

"You cannot hope to bribe or twist
Thank God, the English journalist;
But seeing what the fellow will do
Unbribed, there is no occasion to."

Planting news and views !

People were able to get me to write what they wanted to without wasting their time or money on me. It took me some years to discover that not only were there vast opportunities in my profession to make money illegally but that a substantial proportion of my brother journalists did in fact exploit such opportunities and lived well-beyond what they could on salaries they received from their newspapers. In return they planted stories required of them, slanted news as desired, publicised politicians and socialites, and exposed scandals of people who refused to pay them to keep quiet. Obviously, I cannot name these "gentlemen" because that would involve Yojana and me in endless litigation which neither of us could afford. Let me assure you, dear reader, that instances I cite are culled from personal experience and true. And sad to say that the dirty ones at the game in the profession of Journalism outnumber those who play it according to the rules.

"True" personal experiences !

You must be familiar with the story of an arch-briber of Journalists, a former Union Cabinet Minister. He is said to have kept the entire press corps based in his state capital well-oiled to write favourable accounts of his performance. It is said that once when he returned from abroad, he brought with him bales of suiting material which he gifted in turn to

his journalist friends. A few days later he held a press conference. By sheer coincidence all pressmen who turned up were wearing suits made of exactly the same design and texture. The Minister was thus able to expose the hollowness of these purveyors of the truth.

This story has obviously some "mirch-masala" added to it to prove the pervading corruption among journalists. However, no condiments are added to the experiences I narrate. When I edited an illustrated journal I had to pass bills for photographs used. A large number used to come in unsolicited and free because people wanted publicity. It took me two years to discover that I had been passing bills for the free-unsolicited pictures in the name of a benami photo-agency set up by a member of my staff for the benefit of his mistress. He got money from me and he got money from the people who had sent the photographs—a tidy couple of thousand rupees a month free of tax. Two other colleagues set themselves as food and wine experts. They wine and dined their friends in five-star hotels all over the country, and for an analytical article on the liquor industry, acquired crates of whisky, gin, rum and whatever by persuading the liquor manufacturers that "the editor likes to stock these goodies". Yet another colleague charged the company regular taxi fare to and fro to see pictures that he had to review for the journal. He went by bus, collected a vast hoard of stills to set up a private pictorial library from which he supplied other journals at considerable profit to himself. These fellows lived in clover; the honest and the hauler worked, smoked *beedees*, drank black coffee and trudged home on foot.

Living on blackmail

There are journals in India which live entirely on blackmail. Most of us know them but continue to read them because we love to read gossip and scandal. Some specialise in exposing peccadillos of politicians and socialites, others concentrate on film stars and their love affairs. Large sums of money in cash are passed to publish or withhold publication of such stories. Advertisers are bullied into buying advertisement space by threats of adverse publicity. I recall a Punjabi journal with hardly any circulation which managed to survive on two full page ads from Coca Cola and the Punjab and Sind Bank. When Coca Cola withdrew its ad, the editor proceeded to write a series of articles and print posters warning people of the ill-effects including impotence caused by consuming Coke. Sales of Coke dropped steeply. The ad was restored. It was followed by another series lauding its qualities—presumably including the aphrodisiacal. These yellow journals thrive in Bombay which provides the largest advertising revenue in India. Despite their yellowness and gross vulgarity, State Governments pay enormous sums to have special issues brought out and give royal treatment to their editors. Even Ministers of the Central Government are eager to give them exclusive interviews and compensate them with advertisements from their departments.

Film journals function on an even lower level. Their stock-in-trade is sex scandals of matinee idols and pronouncing whether films are flops or box office hits. Film stars and producers vie with each other to get good notices for themselves and adverse notices for their rivals. Since the film world largely operates on black money, a good bit of it finds its way into the pockets and handbags of film journalists.

And the national press!

Daily papers, notably those described as national and which have editions published in Delhi largely batten on political corruption. Politicians are anxious to see their names appearing in a favourable light in papers read by the governing elite of the Central Government. A friendly journalist can be persuaded to plant a story "from reliable sources" that so-and-so is being seriously considered for the post of a governor, ambassador or chairman of a nationalised bank or public sector enterprise. That is how some names do in fact come up for consideration. Ministers will leak information to journalists if such information enhances their status or denigrates that of their rivals.

The Central Government is anxious to keep the capital's press corps contented. Many are provided

"It takes a brave newspaper proprietor or editor to resist pressures brought on him by these State Correspondents through Chief Ministers who they have obliged and Ministers of Central Government who they have cultivated. The only sufferers of misinformation fed to the papers is the poor reader."

with government accommodation—or deprived of it if they prove difficult. State Chief Ministers are equally anxious to have favourable accounts of their performance in Delhi papers and provide housing and other facilities to correspondents posted in State capitals. The practice of slipping a monthly lifaafa (envelope) containing currency notes into the pockets of amenable State correspondents is known to the editors and the news desk who handle their copy. There is little they can do except cut out blatant praise or criticism "for exigencies of space", or driven to desperation, order the transfer of the correspondent to another State. It takes a brave newspaper proprietor or editor to resist pressures brought on him by these State Correspondents through Chief Ministers who they have obliged and Ministers of Central Government who they have cultivated. The only sufferers of misinformation fed to the papers is the poor reader.

Newspaper proprietors are as guilty of corruption that has eaten into the vitals of the Indian press as the pressmen who prostitute their pens for money. Kipling's lambast on Lords Rothermere and Beaverbrook, then owners of the two largest chains of papers in England is pertinent. Kipling wrote: "What the proprietorship of these papers aims at is power, and power without responsibility—the prerogative of the harlot throughout the ages."□

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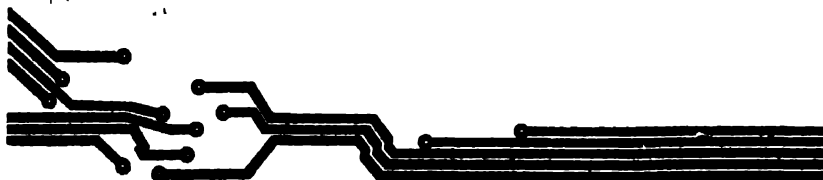
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Journalists

A clear look at the seamy side!

C. P. Ramachandran

Proprietorial interference and the vested interests of journalists themselves have turned the present-day Editors into mere agents of owners, says the author and asserts that the press today, as reflector of public opinion, is in fact a distorting mirror—no one wants to take risks; the job is all important and the emphasis is just on routine stories. Calling the situation as tragic, the author has not much hope for change as there are too many vested interests involved with access to policy-makers.

IN A SECTION of his autobiography, Harold MacMillan, Prime Minister of Britain in succession to Anthony Eden, has written that when the parliamentary correspondent of *The Times* of London gave prominent coverage to a speech in the House of Commons attacking the appeasement policy of Neville Chamberlain, the news editor sneaked in at night and removed most of the salient points. This was because *The Times* was a prominent supporter of Chamberlain and the Astors, who then owned *The Times*, were the leaders of the "Clivedn set" (Cliveden was the home of the Astors) which felt that Britain should work out some kind of understanding with Hitler. The tragic aftermath of the story was that Wynn, the parliamentary correspondent, joined the British Expeditionary Forces shortly after war broke out and was killed in France. The news editor lived on to old age.

"Agents of owners"!

Proprietorial interference in the newspapers is a matter of frequent occurrence. This is particularly so when newspaper-owners are industrialists or businessmen who have to please bureaucrats and politicians. A case in instance was when a report appeared in a Delhi newspaper that a certain Minister returning from Japan was found carrying contraband goods. The minister, who later became a Governor and died two years ago, was a great friend of the industrialist-proprietor. And so the next day a contradiction was carried and the journalist who reported was severely cautioned.

The first press commission, headed by the late C. P. Ramaswamy Iyer, was startled when a newspaper owner, Ramakrishna Dalmia, confessed that he had committed practically every crime known to man. But that may have been a piece of self-abasement. The fact remains that news which affects certain business interests is suppressed. At one time, it was customary for the owners to make use of the newspaper's teleprinter services to find out the goings-on in the market. Perhaps this has not altogether stopped.

Another incident of the middle fifties was the vendetta carried out by certain newspapers against V. K. Krishna Menon, then defence minister under Jawaharlal Nehru. Its origin lay with the United States which was determined to get Menon out because of his strong anti-imperialist speeches at the United Nations where he was the Indian spokesman. He was accused of being involved in what was known as the jeep scandal in the sixties when the transaction is said to have taken place during the Indian army's operations in Kashmir in 1947. The real reason for the business men owning newspapers was that Menon was considered to be a socialist who wanted an enlarged public sector. One editor passed verbal orders that no picture of Menon should appear in his paper unless it showed him in some comic or unseemly light. The English-language press in those days was largely controlled by the American lobby and any journalist who resisted their pressure risked his job.

Keshav Deo Malaviya, the Oil Minister. He was also a left-winger. Moreover, he had angered American interests by improving the prospects of exploiting India's own oil resources. India was utterly dependent on foreign sources for petroleum. Malaviya had changed all that. He was accused of all sorts of things. Once a Delhi newspaper carried a banner headline that some oil well had collapsed due to ministerial incompetence. The report was datelined Calcutta. A month later this writer was in Calcutta and ran into the correspondent who had presumably filed the oil well collapse report. When I queried him, he flatly denied he had sent any such story. It turned out that the material had been collected by the Delhi-based correspondent from some people working for Burmah Shell and the editor had the story published under the Calcutta dateline, a deliberate and malicious fraud.

With the passage of years, the editor has become a mere agent of the owners. He has no personality of his own and his sense of honour (if he has one) is not taken into consideration at all. As they get very good salaries and other perks like a free house and transport, very few editors (if any) face up to pro-

"The Indian public does not get its money's worth through newspapers. That is a fact. Many commissions have gone into the pattern of newspaper-ownership and how to diffuse it or democratise it. But nothing will happen because there are too many vested interests involved who have access to policymakers. That is the tragic situation today."

prietorial pressures. It is simply a process of bribing. There is the well-known case of an editor of an English daily in Delhi who was courageous enough to write mildly critical articles during the days of the emergency. After the emergency was over, the proprietor simply kicked him out and replaced him with a favourite.

And these journalists !

But it is not only the proprietors who are to blame. The journalists themselves are likely to be pliant. It is a well-known fact that district level correspondents, most of them part-time journalists, write glowing reports of the district officials in exchange for favours. They need these favours because they have their own businesses. One person known to me had a transport business and wrote in high praise of the local transport officials whenever he got a chance. Some of the state accredited journalists are provided government houses on nominal rent. They are naturally reluctant to write anything against the state government for fear that they may lose their houses. Here again, some correspondents are known to have private businesses of their own. Admissions to specialised colleges for their children is another reason for the correspondent's lack of objectivity and responsibility. The point is that in a general atmosphere

nalist also gets involved in shady matters.

At the other level, there are also people who try to blackmail officials and politicians for failure to come across in some demand. Two years ago, when there were extensive forest fires in the Kumaon region, most people knew that these fires had been started by wood contractors. But not a line appeared in any of the prominent newspapers because the contractors were taking good care of local reporters. A wholly false story that women had been molested in Calcutta and that one of the ponds in a certain area was full of brassieres was concocted just to bring discredit on the left government in the state under Ajoy Mukherjee.

This editorial opinion !

The editorial opinion of newspapers bear a remarkable resemblance. On any issue affecting economic interests the papers take one line. When the banks were nationalised, there was not a single major newspaper that did not attack the measure. Every argument was adduced to show how it would land the country in a financial mess. But over the years bank nationalisation has been accepted. Many proprietors of newspapers also owned banks or were directors of private banks and were naturally upset over the nationalisation. But what is the worth of editorial opinion if all views are alike ? Thus, over the years, the editorials of newspapers have lost all credibility.

Much the same goes for the language press. Worse, they have an inferiority complex in relation to the English language newspapers and are always trying to imitate the latter. If the English press sets its guns on one man, so will the language press. A recent case shows how weak the language journalists are. A Hindi reporter was the first to secure the story on the espionage case involving the Larkins brothers. His editor first refused to publish the story presumably because he did not want to offend the government. Later, he was persuaded to publish it in some obscure corner of the paper. This was noticed by the sister English publication and an enterprising reporter had it played up in his paper. After that, it became a sensational scoop.

The press, as a reflector of public opinion, is in fact a distorting mirror. No one wants to take any risk. The job is all important. Therefore, the emphasis is on routine stories. The news agencies are not independent at all. They are entirely dependent on the government media like radio and television subscriptions. Besides, state governments also subscribe to their services. The Indian public does not get its money's worth through newspapers. That is a fact. Many commissions have gone into the pattern of newspaper ownership and how to diffuse it or democratise it. But nothing will happen because there are too many vested interests involved and they have access to policy-makers. That is the tragic situation today.

Our services are to set an example not only of efficient service but also of high integrity and complete freedom from communal, provincial or other bias. There are many disruptive and anti-social forces in this country and it is often said that the moral fibre of the nation is not what it was. Evil stalks the land in the shape of narrow communalism and opportunism; black markets and the like have poisoned our trade and business to a large extent. It is for the services to fight these evils and they can do so only if they are men and women of character, integrity and selflessness. We have to fight evil wherever we find it. We cannot afford to succumb to it or to be passive and inert spectators of it.



The dirty dozen !

"The dirty doings that YOJANA¹ has decided to expose, and thereby to cleanse our society of this excreta, is a noble task—comparable to Gandhiji's decision to cleanse his own bath-room and lavatory in the Tolstoy Farm in South Africa.

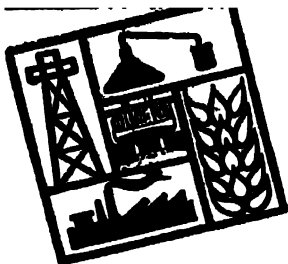
Since then, more than half a century has elapsed but our society has not undertaken such a necessary sanitary task on such a social scale. So let's grid our loins for this necessary social cleaning-up.

No names will be mentioned, but only groups who clog the social flow of India with the litter of their dirt and their dirty doings, and this exposure, I hope, will make the society conscious of these dirty people and their dirty doings, and also make these groups of 'dirty' ones conscious of their dirty deeds and (hopefully) make them self-conscious and, therefore, self-cleansing.

Among these groups there is a complete dozen.

And, they are to be found among (1) bureaucrats, (2) politicians (in power), (3) politicians (in opposition), (4) planners (officials), (5) planners (arm-chair dreamers), (6) mediamen (big), (7) mediamen (small), (8) preachers (religious), (9) preachers (philosophers and economists of the empty minds), (10) god-men, (god-women and god-children), (11) businessmen, and (12) educationists."

K. A. Abbas



Science education for
human development

VOL. 28 NO. 16

Upiana

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Trends in foreign
trade

NEXT ISSUE

Pioneers of Indian
economic thinking

Multitasker dryer biggest in Asia

THE BIGGEST MULTIPURPOSE solar dryer in Asia has started functioning at Alathur in Palghat District of Kerala.

Designed by the National Industrial Development Corporation the dryer functions as a warehouse also. Built at a cost of Rs. 14 lakhs, it has a storage capacity of 700 tonnes.

This is the fourth dryer to be set up by the Department of Science and Technology. But it is different from the other three in the sense that it can dry all kinds of grains and seeds and kernels and cashew and coconut. Others could handle only one or two. It can also dry fish if slight modifications are made.

Two layers of glass panels and another two layers of corrugated aluminium sheet painted black constitute the solar energy absorber. It has a length of 42 metres and a width of 13 metres. The air heated between the sloping concrete roof of the building and the energy absorber is taken through an underground air duct of 1.5 metre diameter to the dryers at the other end of the building.

Two dryers are attached to the system, a bed dryer and a column dryer. The bed dryer is used for coconut, tapioca, cashew, kernels and other similar products. The column dryer is used for grains of all kinds.

About 100 coconuts are dried within 25 hours while for natural drying it takes 53 hours spread over six days. The bed dryer can take upto 3,500 coconuts at one time. Some 90 tonnes of grains can be dried in three continuous eight hours shifts a day in the column dryer. The cost of drying grain works out around Rs. 6 per tonne.

Normally, the plant starts functioning half an hour after sunrise, and it goes on till sunset. If the absorber receives sunlight for three hours in the morning, the system can work throughout the day. □

YOJANA

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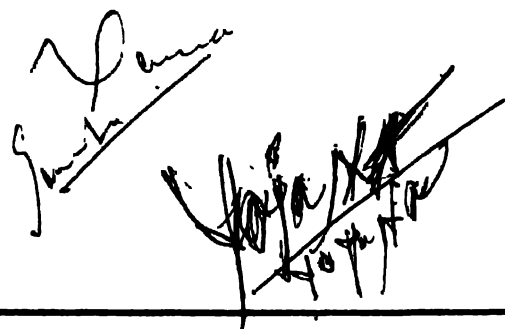
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"Science and technology have been recognised as major tools for socio-economic progress of the country. Science education is not only important from the view point of pursuing a scientific career, and doing research and development, but it is also important to help the overall growth of a person in removing his superstitions, in helping him to understand nature, in his day-to-day activities ensuring a better standard of living." says the author.

FROM THE SCHOOL LEVEL onwards, if one has to ensure good standard of education and its high quality, there has to be a close association between the teacher and pupil. In pursuing a scientific career, this 'Guru-Shishya' relationship becomes still more important, because the student has to work very closely with the teacher and has to interact continuously with him in quest for knowledge.

College education is still more important where the student has to take a decision regarding his future career prospects. It is here that the role of highly motivated and dedicated teachers becomes very relevant.

In the present day society where the students many a time are burdened with many problems and to some extent there is dissatisfaction on several issues, there should be somebody in whom a student can find solace and guidance; that person invariably should be his teacher.

Based on an address delivered recently at the award giving ceremony of Jagdish Bose, National Science Talent Search in Calcutta.

Science education for human development

Mohammed Fazal

It may be worthwhile to point out some causes for this dissatisfaction amongst the youth. These relate to : change in value systems because of the very rapid progress; lack of communication between parent and child, teacher and student etc. generation gap leading to diverse ideologies; the question of what is relevant for future studies, and the most important one being the feeling of insecurity about the future.

Sustained effort required

We will have to devise mechanisms and strategies to find solution of these problems. There cannot be just one solution. Therefore, a sustained, forward looking effort is called for. It is necessary that the universities and academic institutions should induce and build aptitudes of the young people for the acquisition of skill and knowledge. This will certainly require flexibility in curricula, introduction of modern techniques of science teaching and greater interaction between young and old. One may do so, and bridge the gap between students and teachers, parents and children by taking up inter-disciplinary programmes of education with the use of media as well as with the latest innovative techniques in science and technology.

Major tools for progress

Science and technology have been recognised as major tools for socio-economic progress of the country. Science education is not only important from the view point of pursuing a scientific career, and doing research and development, but it is also important to help the overall growth of a person in removing his superstitions, in helping him to understand nature, in his day-to-day activities ensuring a better standard of living.

The essence of science learning is to arouse curiosity and evoke a desire to observe, do things with his own hands, listen and understand various issues around him. Pandit Jawahar Lal Nehru did rightly emphasize that it was science alone that could solve

the problem of hunger and poverty, and the future belonged to science, and to those who make friends with science.

The scientific creativity nurtured at young age in our country could contribute greatly to the technological breakthrough, and furtherance of basic and applied research of international standards. In this context, the question of identifying, nurturing and developing excellence is extremely important.

A Vital role

The young scientists of today have a vital role to play in several areas of national importance such as : popularisation of science, and growth of scientific temper. To get the best in high quality science it is essential to capture talented young scientists and students at an early stage. This will have to be nurtured further by adequate incentives challenging research programmes, and attractive career schemes. The top class leadership in science and technology also will have to come from such a group of young students. Therefore, it will be necessary to ensure the identification at a young age of the best talents, and provision of all opportunities to them in the overall national interest.

It has been noticed in our country that because of the uncertainty of job prospects, many a time a student joins the career not suited to his original creative potential. From the list of the successful candidates for IAS and other allied services examination as also those entering industry, it has been noted that a large number of medical and engineering students go to IAS and other administrative and non-scientific services. Government will have to take a serious view of the situation, and provide adequate opportunities, amenities and facilities to professionals so that they can serve the nation better. Teachers can provide the inspiration and guide science students to select the careers appropriate to their intellectual calibre.

Nature and environment

I would also like to focus the attention of the young scientists to the whole area of nature and environment, its study and importance in their day to day living. We must learn to admire the nature, understand its value and learn to live in harmony with it. That is the crux of maintaining an ecological equilibrium, and ensuring a sustainable development. The young students can very actively participate in environmentally sound programmes of education, preservation of natural heritage, including plants and animals, and creating environmental awareness in the society.

I would wish to emphasise that in this country since independence, Government of India has provided its fullest support at the highest level to the cause of science. In the Approach to the Seventh Five Year Plan approved by the National Development Council the following has been stressed :

"The potential of Indian Science and Technology for contributing to the objectives of modernisation

and development is far greater than has been realised in the recent past. Substantial capabilities have been built, but these have not been brought to bear in full measure on the national tasks. In the formulation of the Seventh Plan, this weakness will be addressed during the initial formulation of plans and projects by identifying the scientific and technological inputs required and then initiating the necessary development work as part of the Plan. The attempt will be to give up the practice of considering science and technology as a sector in its own right and to ensure that the bulk of science and technology effort is an integral part of all economic and strategic sectors."

The achievements of various mission-oriented science and technology agencies have been substantial. The human expertise and know-how in basic technologies achieved in this process is applicable in many other areas of industry, agriculture and rural development. There is a whole host of problems in these areas, the solution of which can be simplified by the application of technological knowledge so available. This effort should, therefore, be part of the planning process, particularly in the area of rural development. □

Delhi Super Bazar achieves record sales turnover

THE DELHI SUPER BAZAR has achieved a record retail sales turnover of Rs. 40 crores in 1983-84 as against Rs. 29 crores in 1982-83.

Set up 18 years ago, it has now a chain of 90 branches in different parts of the city including resettlement colonies and areas inhabited by industrial workers. The needs of low-income residential areas are looked after by mobile shops. Selling thirty-three items "on no profit no loss" basis, the Super Bazar is emphasised on the new 20-point national programme. □

Computers for printing in Urdu

The Union Ministry of Education and Culture is seriously considering the introduction of computers for printing books and publications in Urdu.

The use of computers will revolutionise printing in Urdu and substantial number of copies can then be printed at a reasonable cost.

The Bureau for Promotion of Urdu has set up 25 Calligraphy Training Centres throughout the country. Three of them are exclusively meant for women, located at Sopore (Jammu and Kashmir), Tonk (Rajasthan) and Hyderabad (Andhra Pradesh). The Bureau has published over 455 books on various subjects including glossaries of technical terms; about 120 are on science and technology. It is likely to start correspondence courses in Urdu during the current year. □

Trends in foreign trade

Navin Chandra Joshi

With improvement in product-mix of agricultural and industrial sectors, India should consider switching over to a judicious system of barter with other countries for boosting its foreign trade. The imperatives of economic growth demand that exports be regarded as one of the highest national commitments. For such strategem, production alone will not suffice. An increased productivity will have a crucial role to play if imports are to be curbed, says the author.

THE LAST FOUR years of the Eighties have witnessed an acceleration in the rate of growth of exports and a deceleration in the rate of growth in imports. The annual growth in the value of exports has been higher than the percentage growth of imports. In April-December, 1983 exports had 12.1 per cent increase and imports, a mere 2.3 per cent. Earlier in 1980-81, exports registered a 4.6 per cent increase and imports 3.7 per cent. It is clear that exports are rising faster than the growth in the import bill and it is expected that growth in 1983-84 will be the same as recorded in 1981-82 over the previous year viz., 16.2 per cent.

Decline in trade deficit

The trade deficit continued to register a discernible decline in absolute terms. During the period April-December, 1983 our imports were of the order of Rs. 10,416.52 crores and exports amounted to Rs. 6,858.32 crores which meant a trade deficit of Rs. 3,558.20 crores. This deficit in 1982-83 was Rs. 5,525.78 crores as compared to Rs. 5,801.66 crores in the previous year. Except for two years in the last decade,

i.e., in 1972-73 and 1976-77, India has been having an unfavourable balance of trade. In this context, it is encouraging that the deficit is now on the downward swing since 1981-82. This trend is likely to continue provided there is better management of our imports, particularly in respect of items like petroleum, steel, fertilisers, and so on. Hopefully, the oil discoveries in the offshore and onshore areas will make a significant contribution for completely wiping off our trade deficit in the coming years.

The Union Commerce Minister, Mr. V.P. Singh, said in Parliament the other day that India was all set to take international competition in its stride. Surely, making the Indian economy competitive in world markets is a very critical objective of our economic policy. But how to do it is a big question? The issue involves not only most efficient use of our scarce resources but also a number of policy matters that require urgent changes. Luckily, the Union Government's new Import and Export policy for 1984-85 has further liberalised imports of critical items that are needed for further growth of our economy. This step has been in the right direction. The major thrust is on expanding the production base of Indian economy and on giving a further impetus to exports. With these twin objectives, the policy liberalises import of a number of capital goods, raw materials and components for production purposes, mainly with a view to making production export oriented. The general structure of the policy has been maintained in the interests of continuity and stability. The policy for import of raw materials, components and spares is broadly unchanged, as also the policy for capital goods and imports under Open General Licence (OGL). Thus, there is status quo in respect of the basic thinking and philosophy governing the policy. The liberal trend continues.

Yet, our high-cost economy presents a paradox in a situation of low wage rates in the country. The better solution would be to induct a good amount of operational efficiency, economy in materials and better management. Reduction in cost is a bare necessity

if Indian goods are to be sent out in ever-increasing quantity. The Government has set up several corporations in the form of State Trading Corporation, Minerals and Metals Trading Corporation and so on, for developing and strengthening the efforts relating to specific commodities and for diversifying the country's foreign trade. The Government has given some encouragement to trading and export houses which develop new products and new markets. Their exports would be reckoned at twice the F.O.B. value of annual incremental exports for the purpose of recognition as export or trading houses. Hundred per cent export-oriented units which are registered and holders of green cards, will now be eligible for various credit facilities at par with units in free trade zones for a period of two years upto December 31, 1985.

Need to increase exports

These are some of the highlights of recent changes and progress in our foreign trade. Here it is relevant to point out that while our share in world exports came to 6 per cent in 1979, it fell to 0.36 per cent in 1980. It is feared that India's share in global exports will become almost negligible by the end of the decade in 1990 as other countries are also making a breakthrough in trade. Given a fairly strong and well-diversified industrial base, there is no reason why India's share should not jump up. Also, export of agricultural commodities, including marine products, tea and coffee hold tremendous promise. A long-term export policy for agricultural products seems to be highly critical. In the field of project exports, we can make further progress. Today, India is the third largest country with technical manpower potential, next only to the U.S. and the USSR. Our natural resources are fairly adequate. It is necessary that we diversify the market base by identifying all countries according to different value ranges of our exports. Geographical distance should not come in the way and it be tackled with more shipping facilities made available to all viable distances. We need to make specific targets for markets also.

Commodity-wise, barring certain items such as oil-cakes, tea, jute and semi-processed leather, other export products have been doing well. In April-December, 1983 gem and jewellery exports registered an outstanding percentage increase of 287.12 per cent over the corresponding period in the previous year. Similarly mineral fuels, lubricants and petroleum products were on the upswing. Other exports which show a percentage increase of over 100 per cent are manganese ore, yarns of man-made fibre and mineral manufactures. In the agricultural and allied products, live animals, cashew kernels, vegetables and fruits, tea, spices and raw cotton have done well. In manufactured goods, cotton fabrics, silk fabrics, leather and leather manufactures, rubber and rubber manufactures, travel goods and hand-made carpets have also shown significant increases. Likewise, engineering exports, project exports and our consultancy services abroad have developed rapidly. In civil construction works, which formed a major part of project exports,

Indian firms have made their mark and contracts worth over Rs. 1,100 crores were executed during 1983-84.

Curb on imports

On the import front, Indian has still a large outgo on petroleum and petroleum products, edible oils, fertilisers and chemicals, paper, minerals, steel, machinery including transport equipment, synthetic fibres, various kinds of capital goods and so on. In fact, to restrain growth of bulk imports and of imports generally, import substitution is being sustained by more rapid growth of non-oil sectors through better management, avoidance of industrial unrest, timely supply of inputs for products and continuous monitoring of performance. Investment priorities, however, need to be modified to ensure a relative larger allocation of resources to these sectors. Import substitution in the energy sector through oil expected that production in 1983-84 of crude oil would be nearly 26.2 million tonnes, thus reducing the relative share of petroleum and its products in India's total imports.

An important step in export promotion is the cash compensatory support scheme which continues to be effective for a number of product groups. The Union Government is now considering possibilities of providing this support for the export of saleable steel. It has been felt export of steel should be on a continuing basis to achieve better capacity utilisation in the steel plants and to maintain an equilibrium between domestic demand and availability at the optimum level. The practice of withdrawing from export markets during periods when domestic demand outstrips availability has not helped in increasing steel production.

India's vast and extensive coastline provides the breeding ground for numerous species of edible fish. The resources of the sea for export of marine products have barely been exploited. Deep sea traveling has yet to make its impact. The Government has, in recent years, given a big boost for exploiting the sea resources. Surely, Indian economy has undergone remarkable changes in foreign trade sector, utilising both internal and external resources. Despite international recession and protectionist policies, the country has become an important exporter of highly sophisticated manufactures all over the world. Now greater emphasis is being placed on maximising the domestic value addition rather than exporting commodities in the form of raw materials or semi-finished goods. While a lot of improvement is being made in product-mix of agricultural and industrial sectors, perhaps India could also consider switching over to a judicious system of barter with other countries for boosting foreign trade and international cooperation. The imperatives of economic growth demand that exports need to be regarded as one of the highest national commitments by the Government and the business. However, production alone is not enough; better productivity will have a crucial role to play. □

Encouraging one child families

M.G. Bhasin

Perhaps it is not too early to encourage one-child families. It will reduce the burden on the state, enable the land to become rich and beautiful, increase the scientific attitude of the people and make them healthy and happy.

THE PHENOMENON of population growth—too many, too few is governed basically by two determinants :

- (i) passion between sexes—their fecundity and fertility, and
- (ii) desire to satisfy human needs and wants basic and higher.

The nature of population growth is like an elastic; depending upon how much it is stretched. Its intensity and magnitude makes its scope vast and complex. Hence it requires a multi-disciplinary approach for its rational appraisal, and an inter-disciplinary task force to wipe out the problems it creates.

Broadly speaking, population growth results from births minus deaths. Its rate may be calculated as below :

P.G.R. (Population growth rate) B.R. (Birth rate) D.R. (Death rate) M (Migration)

The crude birth rate, in turn, is obtained as below :

$$\text{Crude Rate} = \frac{m}{p} \times k =$$

m = Total number of births/deaths in a given areas during year

—yk = 1000
P = Total number of people living in the area at the midpoint of the year

The basic demographic statistics (1981) of Andhra Pradesh may be taken to illustrate the intensity of the situation. This was the first linguistic state formed on Indian political map on account of its distinctive art, culture, sculpture, music, dance etc. Table I shows area and population in absolute numbers, and certain other aspects in percentages. Table II shows decedewise variation for fluctuations in population growth for A.P. A glance at the Census of India (1981) would also reveal interdistrict variations. viz., Rangareddy has the highest population growth rate (42.43) and Srikakulam the lowest (7.51). A further look would reveal rural-urban differentials at all levels of analysis. Certainly this type of appraisal ought to form the basis of strategies designed to achieve population growth to zero, a stage where birth equal deaths.

Table I

	Total	Rural	Urban
1. Area in Km.	275,068		
2. Population : Persons :	53,592,605	41,134,896	12,457,709
Males :	27,116,081	20,712,808	6,394,273
Females :	26,476,524	20,413,088	6,063,436
3. Sex Ratio (Females/thousand males)	976	985	948
4. Proportion of rural/urban population to total population	100	75.75	23.25
5. Literacy-rate (including 0-4 age group) Persons :	70.28	76.77	49.87
Males :	60.97	67.77	38.95
Females :	79.82	85.90	59.34

(Source : Census of India 1981 Series II Andhra Pradesh).

TABLE II
Andhra Pradesh
Percent change in Population

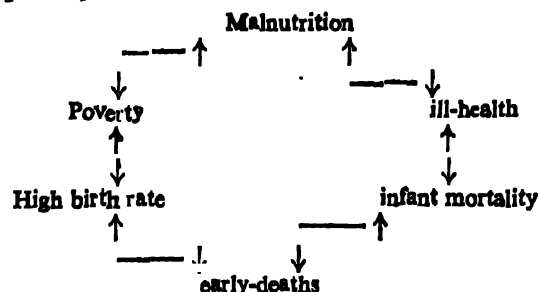
	1901-11	1911-21	1921-1931	1931-1941	1941-51	1951-61	1961-71	1971-81
India	+5.75	0.31	+11.00	+14.22	+13.31	+21.55	+24.79	+24.74
Andhra Pradesh	+12.49	0-13	+12.99	+12.75	+14.302	+15.65	+20.09	+22.76

("Population"take off" occurred after independence").

Genuine commitment

Throughout history population growth has been identified with pride, prosperity and strength. But to-day we are threatened by population explosion, because the number of people in the world exceeds 4,500 millions and it is increasing by 200,000 every-day.

The matter cannot be delayed any longer in developing countries like India. Here each one is looking forward for a break-through in the vicious circle of poverty. This is as below :



Vicious circle of poverty

In my considered opinion this situation can be reversed only by (i) late marriages (above 26 years) (ii) late schooling (8 years) and universal use of contraceptives to avoid child births. Also we should launch vigorous campaigns for one-child families without further delays. It will mean many benefits—not only here in Andhra Pradesh but everywhere. It will reduce the burden on the state, enable the land to become rich and beautiful, increase the scientific attitude of the people, and make them happy and healthy. But it is not an easy task to reduce the growth rate from 2.34 to "0". Nonetheless, it is achievable by :

- (i) genuine commitment of leaders to health-based family welfare programmes at global, national, regional and local levels, and
- (ii) wide availability of cheap, safe and secure fertility control techniques and methods, their voluntary acceptance, and, adoption.

□

Oral rehydration scheme to prevent diarrhoea

RURAL UNIT for Health and Social Affairs, RUHSA P. O., North Airthcot district, Tamil Nadu, has launched an intensive educational programme to prevent diarrhoea and diarrhoeal deaths among children below five years in K. V. Kuppam Block. Diarrhoea causes loss of water and salt from the body which ultimately results into death. It is known as Diarrhoea and Oral Rehydration Scheme (DORS).

The programme is designed to reach the mothers, school children and other adult groups through the community volunteers and staff of RUHSA to impress upon them the usefulness of Oral Rehydrations Solution (ORS) in preventing diarrhoeal deaths. The scheme endeavours to decrease both the deaths due to diarrhoea and the incidence of diarrhoea in children over a two years period.

People have by and large realized that such deaths are not only preventable but also preventive measures are simple and can be taken with ingredients available at their home. If the loss of water, salt and sugar is replaced, then deaths do not occur. The replacement is done orally. Oral rehydration solution can be prepared at home by mothers and it is now considered more useful than ORS packets

The scheme involves a multi-media approach using various avenues of communication to bring about changes in the understanding of the causes of diarrhoea and its management at the community level with the use of ORS. The programme has been initiated with a baseline survey in August, 1983.

The objective of Diarrhoea and Oral Rehydrations Scheme (DORS) are (1) to decrease deaths due to diarrhoea in the 0-5 years age group children by 50 per cent over two years, and (2) to decrease the incidence of diarrhoea in K. V. Kuppam Block over the next two years.

Process objectives of DORS, at the end of two years, will cover 90 per cent of mothers who will be able to identify the causes of diarrhoea; recognise the effects of loss of fluids in diarrhoea, describe the consequences of diarrhoea; explain the role of ORS in diarrhoea; describe how to prevent the onset of diarrhoea; and describe how to prevent the spread of diarrhoea. When tested 90 per cent of mothers will be able to make ORS correctly and 75 per cent of mothers of children with diarrhoea will have used ORS. Besides, 75 per cent of the community will be aware of cleaner and safer feeding practices.

A major objective of RUHSA will be to facilitate adequate drinking water for every village. □

TOWARDS SOCIAL REVOLUTION

a Case for Economic Democracy -

VASANT SATHE

A Serialisation

5

The political system

Post-independence scene

THE SURGERY PARTITION RESULTED in a blood bath and left a deep scar. However, it left the two parts at least with the freedom to follow their own paths of progress and development as two distinct nations.

Now comes the major question of democracy. Both India and Pakistan, and for that matter, many other countries in Asia, initially adopted a democratic political system in their Constitutions. But because the essentials of the democratic system had not been allowed to catch roots and sprout into a strong tree, many of the democracies have fallen prey to the axe of totalitarian dictatorship.

We in India have had the singular fortune of having the background of the freedom struggle under the leadership of Mahatma Gandhi. This has not only given us a strong sense of nationhood but also brought great intellectual stalwarts on the scene who together applied their minds in the Constituent Assembly to give to this country a workable democratic Constitution. Right from the beginning, the founding fathers of the Constitution knew that Indian society was basically federal in character because of linguistic and cultural diversities. Geographically also, India is a large subcontinent and the people in different parts have developed separately over the past thousands of years. The main factor which sustained them in a common bond over this period has been the depth, flexibility and continuity of the *Sanatan dharma*.

The people, therefore, wisely felt that in modern times they needed only to adopt the principle of equal respect for all forms of religious thought to make secularism the basis for India's Constitution along with political democracy. Language being the main force through which education, culture and heritage were closely linked, the founding fathers, shortly after the framing of the Constitution, agreed to restructure the Indian states on a linguistic basis a process which was begun and completed in the nineteen fifties.

In view of this, it is easy to understand the need for having a common language which would be understood by the entire people of the country because

language is the only medium for communication of ideas, thoughts and knowledge and is the best unifying or binding factor for any people who claim to be a nation. However, with the best of intentions, it has not yet been possible to accept one common language for the entire country. The existence of English as a language of the educated classes which are spread out in all parts of the country and continue to occupy all important positions, both in government as well as in industry, has made it even more difficult to adopt an Indian language as a national language.

After all, language is, in spite of all emotional attachments, mainly a vehicle for the communication between people and people and, hence, unless the people find the necessity of having a particular language as this vehicle, they would not take to it. It is well known that people, when they go for trade from one region to another, very soon pick up the language of the latter region.

Rationally, people belonging to different parts of the country are aware that the most convenient and widely spoken language which could be adopted as a national language would be Hindi or Hindustani. But obviously, no language can be imposed and it is this sense of imposition which creates resentment and hostility. I have often felt that more harm has been done to the spread and acceptance of Hindi by the so-called champions of Hindi than its opponents, and I can say this being a person whose mother tongue is not Hindi, but who has acquired sufficient command over this language. Even today I sincerely feel that if Hindi as a language and as subject could be voluntarily introduced at the primary school level throughout the country, to grow with the students in higher classes, within a period of 10 to 15 years, it would become the language of practically every young educated person in the country. But under no circumstances must feeling be created of imposition and no time limit should be set for adoption of Hindi. Let it at the same time be understood that Hindi itself must evolve by accepting and adopting words from various languages of the country. Some day it would be considered useful and expedient to adopt one

common script, which may preferably be Devnagri, not only because it happens to be the script from which most of the other scripts of Sanskrit-based languages have originated, but also because even from the grammatical and linguistic point of view, being phonetical in character, it would be one of the most convenient and useful scripts. Even there, certain modifications could always be made.

The leaders of India felt and held a near unanimity of belief that India could bring about a balanced economic growth only if it adopted a system of planned development where there would be freedom from exploitation and the benefits of growth and an equitable share in the units of growth could be enjoyed by all people. Soon even this principle was adopted in the preamble of the Constitution and was termed the objective of socialism.

A human community, when it is organised for an orderly life in a given territory, becomes a state and a group of communities which acquire a feeling of oneness is called a nation. A people as a state create a mechanism through laws which include a constitution and other regulations to conduct the affairs of social life, be they political, economic, defence, or external relations and this organised structure is called the government. In a democracy, the people as a whole are deemed to be the final determining factor in all matters concerning their life. But, in practice, as the number of people spread over a sizeable territory is very large, they have devised a mode of electing their representatives periodically and delegating to them the power to manage the affairs of the government. This elected body is given different names such as parliament, congress or assembly. It is this body which is the custodian of the sovereign rights of the people, and being perpetually answerable to them, if it does not fulfil the trust reposed in it, the people have the right to change their representatives in it at the end of the fixed term.

Hence, no body other than the elected representative body can claim to have the right to either make or interpret the will of the people. The Indian Constitution, like any other corpus of laws, also lays down the structure of the government. The power to amend it lies solely with the elected representatives who, if they act arbitrarily, are answerable to the people at the polls. No body, for example, a court, howsoever eminent, can claim to speak for the people, much less bridge the right of the elected representatives who alone can be custodians of the sovereign will of the people. If these custodians go wrong, the people can rectify their mistake by having them changed, but if the highest court goes wrong, there is no higher body which can correct it. It is one thing to say that a body like the Supreme Court or a High Court, consisting of judicial experts can be entrusted with powers to examine whether any laws are in conformity with the will of the people as expressed in the Constitution as amended from time to time and another thing to say that the elected body, namely, Parliament, has no right at all to amend certain articles of the Constitution. Such a proposition would be the very negation of democracy.

Hypothetically, it can be argued that an unscrupulous Parliament, even by two-third majority in both the houses, is capable of amending the Constitution to take away the democratic right of the people altogether and impose a dictatorship. It can also be argued that even a most beneficial amendment like the right to work or putting a ceiling on urban property could be struck down as ultra vires by the Supreme Court. In the first instance, the people at the first available opportunity can throw out their erring representatives. But in the latter case, they would have no such option to correct the decision of the full bench of the Supreme Court even if they consider it to be totally contrary to their will.

We are not considering subversion of the democratic Constitution by a military dictatorship. Because, in that case, even the Supreme Court becomes redundant.

The preamble to the Constitution of India is as follows:

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a **SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens:

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUITY of status and of opportunity, and to promote among them all;

FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation.

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

We have now to consider whether the aforementioned objectives are being fulfilled by the socio-economic system that we have adopted or, for that matter, even by the political system which we have enshrined in the Constitution. I will first deal with the political aspect, that is, the democratic structure.

The democratic structure

Politically, we have come to accept that a democratic political structure gives the best opportunity to the freedom of an individual, not only to think and express himself but also to pursue his creative talents in the spheres of his choice. The best description of this democracy has been that it provides a political organisation of human affairs which gives a government 'of the people, by the people and for the people'. The larger question is : Can this political structure also not create an economic structure, with the organisation and management of material and human wealth, generating resources, in which the economy may also be 'of the people, by the people and for the people'? Must it remain a distortion of being 'in the name of the people, by the few and for the benefit of the fewer'?

The first prerequisite for a democracy is that the people should not only be free to elect a representative government but should also have a permanent and continuous authority to be able to supervise and exert their influence on the elected representative government. To the extent that this continuity, effective participation and influence on the government prevail, the democracy would be stable and strong. But if the election becomes a formality to be gone through once in four or five years, and when those in the government feel cut off from the people, are not responsive to their needs and do not feel responsible to those who elect them, then the very roots of democracy start to erode.

The other prerequisite for a democracy, particularly for a parliamentary form of democracy, is the availability of a clear and identifiable choice to the people, mainly at the national level, which would enable them to choose their representatives and leaders who could provide a stable administration and government, holding together the entire country in the bond of national unity and integrity.

In my opinion, what has remained the greatest drawback of Indian democracy is the fact that although more than 36 years have passed since Independence, a viable alternative to the Congress Party at the national level has not yet emerged. The reasons are many, and it will not serve any useful purpose, at least for the limited purpose of this discussion, to go into details. Suffice it to say that the main force of the Independence movement which had grown in the name of the Congress continued to be the main political party to represent and to lead the nation unitedly while an alternative force which would need to have essentially a nation-wide acceptance and be able to inspire confidence in the people about its capacity to uphold and implement the objectives of the Constitution could not emerge at all.

Most of the opposition parties have, in fact been offshoots of the Congress. This could have given them a basically healthy character of providing the same or similar image, but in their anxiety to gain power quickly, they joined hands and compromised with forces which were known for their communal or non-democratic character. As a result, these democratic socialist and secular elements also lost their credibility.

Again, a major factor responsible for the absence of the evolution of a viable political alternative at the national level has been the narrow personal ambitions of leaders who did not have the patience to nurture the growth of a national alternative. This became apparent when the people of India were good enough to provide a massive opportunity to the entire opposition to form a government at the national level in 1977. But the leadership threw away this great opportunity mainly for personal reasons, yearning for positions of authority and power.

The defeat of the Congress had also shaken it to its roots and had brought out not only its basic strength but also its inherent weakness. Its basic strength lay in the fact that the Congress had its roots

in practically all parts of India, spanning out to the villages, and that given a rallying point at the national level, the party could rally round such a person or leader. But the real weakness lay in the organisational structure. The Congress was initially a movement and not a political party in the real sense of that term. Sometimes, I feel that even in the later periods the leadership of the Congress has, as a matter of unwritten understanding as it were, allowed the Congress to remain a loose movement and has, in fact, never attempted to make it a well-organised political party. This might have had its advantages for some time as a dividend obtained from the Independence struggle, but the time has now come to think whether such an amorphous organisational structure can really deliver the goods. What has afflicted the Congress has, more or less, afflicted other political parties as well. There is hardly any party with a well-knit organisational structure which can claim to prevail and pervade throughout the country and hold the nation together.

The political structure, whether of a party or the state is, after all, a means to an end; the end is the well being of the entire society which creates this political structure. We have to consider to what extent a particular political structure has served this basic objective of being conducive to the welfare and well being of the people and has contributed to their growth and progress.

For the Constitution of the country, if party-based democracy, whether in the parliamentary form or in the form of a presidential system, is to prevail, then it is imperative that the structure of the party be so organised as to continuously provide an arrangement not only for the people to elect their representatives freely and periodically but also the possibility of, and an opportunity for, their active participation in implementing the policies and programmes accepted by the people through their representatives. To the extent that there is such an arrangement, democracy will prevail and be effective in the actual implementation of policies and programmes.

India has inherited a whole administrative system in which a permanent civil service ran the administration of the country right down to the village level. This has no doubt provided a system of administration which was originally intended to enforce law and order and to facilitate the collection of revenue. As the areas of activity grew, either controlled or encouraged by the government in the economic, social and technological fields, this administrative apparatus was also enlarged. It is this administrative structure, consisting of brilliant officers selected from among the best material in the country which, for all practical purposes, runs the administration of the whole nation even today.

To the extent that the political authority, as representing the people could lay down policies and programmes that would be conducive to the welfare of the people and could ensure their implementation through the administrative machinery, it could provide a workable democratic apparatus. But we have learnt from experience that very soon a

hiatus develops between the political party and the administration. The administration, in the nature of things, is normally status quo oriented, and, because it has no direct responsibility for implementing the socio-economic programmes, it always tends to justify itself by trying to be safe on the files. A whole system of paper work, of checks and counter-checks, at all levels, grows into a virtual labyrinth. The main cause of delay at the decision-making levels is because of the absence of a nexus between the decision-making authority and those who have to implement the decisions.

Hence, unless we reorient or restructure the administrative system so as to make it not only responsible for assistance at the decision-making level but also for the implementation of the programmes approved by the people through their representatives, the system as it exists will not show results or be efficient.

But what is more important for democracy is the need for the participation of the representatives of the people in both policy-making and its implementation. Today, we find that the whole political apparatus, namely, the political parties as well as the legislatures, is becoming more of a formality and a superficial entity, existing as if to fulfil a ritual of democracy rather than being an effective instrument of social change, both in terms of policy-making and implementation.

If we look at the working of Parliament or State Assemblies, we find a whole body of elected representatives sitting for months together and giving vent to their feelings in a general way, but, because of the system, hardly ever able to contribute in depth to the legislative process.

In practice, on any given Bill, only a few members can speak and, that too only for a few minutes, normally between seven and fifteen. The Bill in question would have already been drafted by the administrative body as representing the will of the government or the party in power. Under the existing system, there is no political forum, therefore, where an in-depth or a critical application of the mind, even at the basic policy-making or legislative level, takes place because, apart from general observations, on an entire Bill consisting of several clauses, one can hardly expect any member, however intelligent he may be, to make a useful and substantial contribution.

It is, therefore, imperative to evolve a structure in which Member of Parliament could meet in smaller groups or committees according to each individual's inclinations or knowledge of subjects and in which the legislative process could be discussed in greater depth. Indeed, such a structure has been evolved in other democracies and is proving to be more effective. At least, it provides better and more real participation.

If the superficiality is at the legislative level, it is more apparent at the executive level. At the latter level, apart from a person who is sup-

posed to be the minister, in the entire executive hierarchy and structure, no elected representative of the people has any voice or even contact. Theoretically, the minister is supposed to be responsible for implementing the decisions and the programmes, but obviously, no individual can operate at all levels and being like a bird of passage, his responsibility for implementation remains only a theoretical concept. In effect, the entire responsibility for the implementation of the laws and decisions made by legislation is left to the will and the capacity of the administrative system.

The party organisation has some superficial concepts as already stated, but at all other levels, it hardly has any voice. And if it did have a voice, it has no powers and responsibility for the implementation of programmes at any level. Members of the party organisation are placed on various advisory committees in an honorary capacity and as they have no responsibility, they become more of a nuisance than a help. There is a plethora of committees and bodies to which the administration is accountable simultaneously, and this has only a nagging and 'retarding effect.

In the light of the experience gained over the years, a time has come to consider in what way can we make the party cadres not only responsible and effective in the legislative process but also actively participative in the entire process of the implementation of the policies and programmes at all levels.

Somewhere at the back of their minds, politicians in this country have a feeling that the political cadre, as against the administrative cadre, must consist of people who are imbued with a sense of selfless service and sacrifice, that they must work without expecting proper and fair remuneration. This is a hangover of the past and has led to such a hypocritical approach that it has vitiated the entire political character of the democratic parties.

Take, for instance, party organisations. Nobody has ever believed that party organisations also need whole-time office-bearers who have to be paid a reasonably decent remuneration to maintain themselves and their families. At the time of an emergency, such as a war, almost every citizen does extra work as a volunteer, but in normal times we cannot expect everyone to put in a whole-time voluntary effort without a means of livelihood. The result is that party organisations have no proper funds of their own, do not have proper buildings or premises to carry out official work and, above all, do not have properly paid office-bearers. This is true of all political parties. Sometimes, it is amazing to think that whereas individuals, many of whom have had nothing to do with the freedom movement, have managed either individually or in the name of some institution to acquire expensive plots of land in most of the cities of the country and have erected buildings from which they get huge rents every month, yet nobody ever thought of putting political parties, which are the very basis of democracy, on a sound financial footing whereby they could have recurring revenue, either in the form of rent or interest income,

and from which they could maintain a well-paid and efficient party administration.

The result is there for everyone to see. The only avenue for a political activist of any party is to try to get into legislatures; whether or not he has any knowledge or inclination making him capable of applying his mind to legislation becomes immaterial, because, that is the only way he can acquire both remuneration and status. At all other levels, the rest of the party members have only one role—to serve as agents or go-betweens between the political authorities in the government and those having industrial or business interests. Their activities are limited to either trying to obtain licences or permits for others in the hope of getting a cut or commission from them or trying to get some people transferred or promoted. This is the only way they can exert their influence and maintain their apparent status in society as party members. It is indeed painful that a dedicated party activist in a democracy cannot be paid a monthly remuneration equivalent to even that of a peon in the government service or a bank.

It is, therefore, to be seriously considered how the active members of a party can be openly and honourably associated at various levels of the implementation and the execution of policies and programmes along with the administrative system so that they can be held accountable as a unit in which the people place their confidence.

Once there is a lurking feeling that the members of a political party need not and should not have any participatory role in the functioning of the government at different levels, then slowly, but surely, the whole party structure starts getting diluted to an amorphous state. It is then called a movement—a perpetual mass movement—so that there need not be any responsible cadre nor any need for maintaining them.

In such a situation, there is no serious need for any membership because members are not supposed to have either any rights or responsibilities. All that we need is a loose apparatus which will become active at the time of elections to organise and canvass votes and this is now provided by that category of people who know how to benefit from the elected representatives and the government. Hence, for the last so many years, no political party in the country has really had any serious membership where members from the grass-root level have exercised the right to elect their representatives upto the highest bodies. And unless the basic concept of the role of the party membership becomes clear, the present situation will continue to exist.

Thus, the democratic process becomes a superficial form, and, if one may say so, even a force at the party level, a formality at the legislative level, with an efficient but unaccountable administrative machinery at the executive level, and above all, a 'holier-than-thou' attitude at the level of the judiciary.

The Press as the fourth pillar of democracy and as a mirror of society reflects the general dissatisfaction and frustration of the people, and very soon the entire democratic process and system of civilian authority starts getting eroded and discredited. Then,

it is only a question of time before the entire structure collapses to be replaced by an authoritarian form of government, which mostly is a military form of dictatorship and which alone has the sanction of the gun.

It is true that democracy has entrenched itself deep in the hearts and minds of the people of India, and the fact that the Indian people have demonstrated tremendous sagacity and common sense has been the only saving grace and redeeming feature of democracy. Also, the fact that elections have been, by and large, free and fair has also contributed to the strengthening of democratic roots. Another factor, i.e., the size of India, has also contributed indirectly to the country not succumbing to any centralised authoritarian form. These factors have aided the continuance of the democratic apparatus, and one always hopes that this pattern will continue. But, on the other hand, if we allow the vitals of democracy to be weakened and eroded by, in effect, rendering them paralytic, this is bound to affect the entire body politic sooner or later.

Hence, there is an urgent need to consider restructuring both the party system, so as to make it more participatory, and the administrative system, so as to make it result-oriented and accountable. □

(Next Issue, SUSTENANCE OF DEMOCRACY)

Power Generation Target for 1984-85

A TOTAL GENERATION of 154 billion units has been programmed for 1984-85, comprising 98.5 billion units thermal, 3.5 billion units nuclear and 52 billion units hydro.

Although an additional generating capacity of over 14,000 MW would be commissioned during the Sixth Plan period, there will still be power shortages in different parts of the country because growth in demand for power due to industrial and agricultural development and extensive programme of village electrification.

Capacity addition

The Union Energy Ministry is of the view that this situation can be met only by a much better utilisation of existing capacity and by expediting the installation of new generating capacity. Moreover, a greater emphasis has to be laid on setting up of adequate transmission system and energy conservation in the context of the existing power shortages.

It is proposed to add a total of 3,399 MW of new generating capacity during 1984-85. This will comprise 602 MW hydro, 2,562 MW thermal and 235 MW nuclear. The units identified for special attention in this regard are : Ropar Unit-2 (Punjab); Kobra West Unit-3 (MP); Patratu Unit-10 (Bihar); Farakka STPP Unit-1 (Central). Besides these, there are some other thermal units such as Anpara Unit-1 (210 MW-UP); Parli Unit-4 (210 MW Maharashtra); and Bongaigaon Unit-4 (60 MW-Assam). All these units are currently under implementation. □

The changing status of rural women

H. G. Hanumappa and
T. M. Sujatha

Mahila Mandals are doing positively good work for improving the lot of rural women. Training in stitching is very popular among rural women as it helps not only in saving money but also in earning it. Keen and sincere interest of the organisers of Mahila Mandals can go a long way in helping rural women to acquire new skills and lead a better life.

THE MAHILA mandals or the womens associations set-up at the village level can be considered an important instrument of change among rural women who remain one of the most backward sections of our society and there is an urgent need to develop their overall personality. One of the best possible ways to accomplish this is to encourage formation of more and more mahila mandals in the villages and use them as change agents.

Most of the rural development projects contain very few programmes for women and children. Community development projects were first launched in 1952, the welfare organisations began their activities in community development blocks with coordination committees and were called welfare extension projects. In 1961-62 the activities were handed over to the rural organisations called mahila mandals.

Mahila mandals

According to the available information there were 58,300 mahila mandals functioning at the end of 1975-76 with an average membership of 364 per block. In Karnataka, Mahila Mandals are registered under the Societies Registration Act. The growth and development of mahila mandals depend on the extent of active

participation of grama sevikas. It is the grama savika, who has to initiate the rural women to enrol as members of mahila mandals. The functions of a mahila mandal are looked after by its office-bearers, who are elected or nominated from among the members to look after the functioning of mahila mandal. Regular visits of officials, (both grama sevikas and mukhya sevikas), attendance of teachers (both to the mahila samaja and balwadi) and interest of the members of the Mahila Mandals in taking up maximum number of programmes are some of the essential requirements for the successful functioning of these organisations.

Broadly the aims and objectives of mahila mandals encompass such activities which can promote socio-economic and political interests of the rural women, through voluntary action based on democratic principles.

Institutions like mahila mandals should become part of the village life and in the due course much can be expected from certain well established mahila mandals and such other voluntary institutions which can look after the educational, social, economic and cultural needs of the rural women.

A case study

Here an attempt is made to assess the functional impact of mahila mandals in the process of socio-economic upliftment of rural women. Bangalore rural south and north taluks form the area of the present study. There are thirty six mahila mandals working in Bangalore rural south (13) and north (23) taluks. Sample of ten mahila mandals each from Bangalore rural south and north taluks were selected, which were reported to be functioning well. Twenty different mahila mandal presidents and eighty other participants were selected randomly for the study. Separate questionnaires for the committee members and the participants were prepared.

Rural women come in contact with one another at the initiative of grama sevikas or mukhya sevikas.

On a day decided by the sevikas, all the members are called for a meeting to elect the office bearers from among themselves. Each mahila mandal usually has a president, a vice-president and a secretary. The staff includes teachers for both mahila samaja and balwadi and a servant (Aya). They are appointed by the government or the village panchayat. Mahila Mandals are supposed to keep the records of its functions, finances etc.

Results

The following are some of the socio-economic characteristics which emerged from our study of office-bearers and members of mahila mandals. With regard to the composition of the age of the committee members, 65 per cent of them were in the age-group of 30 to 50 years.

More than 75 per cent of the presidents of mahila mandals were the wives of the village headmen or chairmen or patela (gowda). Remaining 25 per cent were from those who were interested in the welfare activities of the community. One secretary of a mahila mandal has been serving in her organisation for the last 25 years, with a sense of dedication.

70 per cent of the office bearers were from Vokkaligas, 20 per cent were Brahmins, 10 per cent Lingayats. 70 per cent of the office-bearers were rich belonging to families having more than 25 acres of land.

72.5 per cent of the participants in different programmes were from higher castes and 27.5 per cent were from S.C. and S.T. and their participation has been quite good.

With regard to the educational qualifications of office-bearers, 55 per cent had studied upto high school or S.S.L.C. None of them were reported to be illiterate.

63 per cent of the members (participants) had studied upto 10th standard. All the participants reported were literates.

In terms of marital status, 85 per cent of the members were married and 15 per cent unmarried. 17.5 per cent of the participants were employed women. 74 per cent and 26 per cent were from nuclear and joint families respectively. Duration of participation indicated that those with one year participation were more (34 per cent) and those with participation of 9 to 10 years were not many (3 per cent).

From the data we could identify 5 major activities of mahila mandals :

I. Skill formation which includes training in crafts, tailoring, adult literacy programme, using of pesticides and new methods of agriculture and resources utilisation.

II. House Keeping which includes house keeping programme, kitchen gardening, improved method of cooking, family planning programme and child care programmes.

III. Health and Hygiene Programmes which include keeping the village clean, preparing manure beds, sanitation programmes, keeping the drinking water well clean and special programmes for the dropouts among the school children.

IV. Balwadi Activities cover baby show, play activities of balwadi programme, learning activities of the Balwadi programme, drama, field activities (sports) and music programmes.

V. Recreational programme; cover sports activities public lectures, public functions, filmshows and entertainment. These programmes also cover Saraswathi Pooja, Independence day, Republic day and special programmes : film shows for the benefit of farmers.

If we take a look at the attendance of women-members in various programmes, we find that tailoring and craft classes are highly popular. More than 90 per cent attendance was reported in both these programmes. Training in tailoring activity helped in saving some money which was being spent on getting the clothes stitched, and also helped in utilising their leisure time in stitching clothes for others and resulted in earning some extra income for the family.

In the village Hesarghatta typewriting training programmes organised by mahila mandal have been very popular.

One notable feature of the mahila mandals that we studied was the interest that members evinced in arranging excursions to various tourist and pilgrimage centres inside and outside Karnataka. Though the highest number of women-members visited places like Bangalore and Mysore, the response to other places also was quite encouraging. This tendency indicates the growing interest among rural women to visit different places.

When asked about the future plans of these Mahila Mandals, many have responded and have supplied a list of these programmes. Improvement in tailoring and crafts finds an important place in the future plans of these mahila mandals.

Improvement in life style

The women participants felt that the mahila mandals are doing positively good service to the rural women. As there is some improvement in the socio-economic life of rural women, all the participants of the mahila mandals whole-heartedly suggested for its continuation in their villages. They felt, mahila mandals helped them to improve their general knowledge, but expressed the doubt whether mahila mandals could help them to improve their total personality. However the participants felt that mahila mandals helped them in bringing about a better understanding among the members and also to improve their status in the village.

With the introduction of mahila mandals in a village, a change in the way of talking of the women, could be discerned. Also there was increased cultural awareness among them and certain improvement in their self-care and behaviour. They were found to be more neatly dressed and were found to keep themselves more clean and tidy in their personal habits. There was an improvement in the social interaction among women, who have learnt the method of talking with others with more confidence and with some sense of assurance. In some cases, there was an improvement in the socio-economic conditions especially.

(Contd. on page 20)

The case study shows that the IRDP has made a discernible impact on the income generation and income distribution of its beneficiaries. Various schemes launched under it have contributed towards reducing poverty, employment generation and raising the pace of rural development. However, some gaps and defects in the implementation process remain to be bridged and remedied.

THE CENTRAL and State Governments have been experimenting with a variety of programmes for rural reconstruction. Programmes such as community development, employment creation etc., were undertaken with this objective in view. But experience showed that these programmes did not succeed both in removing poverty and unemployment and creating productive assets.

Consequently a new programme, popularly known as Integrated Rural Development Programme (IRDP), was designed which gives special emphasis to the development of people belonging to the weaker sections such as small and marginal farmers, tenants and shares croppers, landless labourers, rural artisans, members of Scheduled Caste (SC) and Scheduled Tribe (ST) communities.

Identification of beneficiaries started in 1978-79. The IRDP was extended to all the villages in the country in 1980. Beneficiaries are identified on the basis of a household survey conducted in all blocks. The programme is intended to assist target groups to get gainful employment to improve their standard of living and lift them above the poverty line. Assistance

Has IRDP succeeded ?

Harikumar S.

is provided to families whose annual income does not exceed Rs. 3500. Though all poor families with annual income of Rs. 3500 or less are eligible for assistance under IRDP, families with the lowest income were to be assisted first. The degree of indebtedness of the family is also taken into account in identifying the beneficiaries. If sufficient beneficiaries from below the poverty line could not be found, then households who have interest and initiative could be chosen. Assistance may be provided to more than one member of a family so that combined income of all the members of the family is large enough to raise the whole family above the poverty line.

Here we propose to evaluate the implementation of the programme in Vyttila Block in Ernakulam District on the basis of a sample survey conducted in the Kumbalam village of the block.

Kumbalam village is situated on the south east part of Ernakulam District. It comprises four independent islands such as Kumbalam, Panangad, Cheppanam and Chethama islands. The total area of the village is 20.79 Sq. Kilometres. The only means of transport available to the village is the Kumbalam ferry service.

The chief occupation of the people are fishing, agriculture and coir making. Important item of cultivation is coconut. There are five primary schools, one upper primary school and two high schools. Even though medical facilities are very scanty, there are a number of medical dispensaries. There are two post offices operating in the village.

The data for the present study was collected on the basis of structured questionnaire. Seventy-five beneficiaries were selected at random from a total of 1,400 beneficiaries. For analysing the income of the village, ration cards of households are used as the basis, because income certification are issued on the basis of ration cards.

For calculating additional employment generated by a scheme, following method is used. When a beneficiary purchases a milch cow and if he is engaged for

3 hours per day to look after it and sell the milk etc., then this 3 hours is treated as the additional employment created per day in man hours. When this is multiplied by 30 days, it will give the monthly additional employment generated per scheme per day. Same method of calculation is used for other additional employment creating schemes.

Social and economic background

According to the sex-wise distribution of the sample population, 51.52 per cent are males and 48.48 per cent females. Some 49.8 per cent of the sample population are depending on the 50.2 per cent of the working population. Of the sample population, 19.13 per cent are Christians, 5.43 per cent are converted Christians, 6.09 per cent are Muslims, 6.8 per cent are Nairs, 39.58 per cent are other backward classes, 22.17 per cent are Scheduled Castes and 1.3 per cent belongs to Scheduled Tribes. Thus, of the sample population majority belongs to backward communities.

Some 25.4 per cent are illiterates. More than 23 per cent of the sample have received primary education. About 32.6 per cent has studied upto the 7th standard, 16.3 per cent had high school education and 2.19 per cent of the sample population had gone to colleges. Approximately 0.8 per cent of the sample population are degree holders. In short, 74.57 per cent are literates among the sample population.

The total ownership of land holdings of all the sample households is 15.17 acres. Average ownership of holdings per sample household is 0.20 cent. Nair household is 0.86 cent, Scheduled caste family 0.10 cents, scheduled tribe household 0.10 cents.

The occupational structure of the sample population is divided into casual labourers, fishermen, agriculturists and those engaged in other businesses. Of the 75 sample households, 22.67 per cent belong to the category of casual labourers, while 30.67 per cent are engaged in fishing, 12 per cent are conducting dairy units, while 34.67 per cent are engaged in other small scale businesses.

Income distribution

To analyse the impact of IRDP on the beneficiaries, the income distribution of beneficiaries before and after the implementation of the programme is analysed. It is seen that 20 per cent of households belong to the group whose income fall below Rs 1,000 per year. Twenty eight per cent of the sample beneficiaries belonged to the group having income between Rs. 1,000 and Rs. 1,500. Forty per cent belonged to the income group of Rs. 1,500 and Rs. 2,000, 9.33 per cent belong to Rs. 2,000 and Rs. 2,500 group and 2.67 per cent belonged to the income group Rs. 2,500 and Rs. 3,500 per year. This shows that all sample beneficiaries are below the poverty line.

The caste-wise distribution of IRDP beneficiaries show that 20 per cent of the beneficiaries are Christians, 5.33 per cent converted Christians, 4 per cent Muslims, 6.68 per cent Nairs, 41.33 per cent OBC, 21.33 per cent Scheduled Caste and 1.33 per cent Scheduled Tribe.

Development schemes

For distributing assistance under IRDP in the village, 17 different schemes have been implemented. The schemes are suitable to the village, but from the point of view of the beneficiaries all schemes are not sufficiently income generating. According to the sector-wise distribution of beneficiaries, there are 3 schemes in agriculture sector, 31 schemes in livestock, 19 schemes in fisheries, 16 schemes in small scale industries and 6 schemes in tertiary sector.

In Agriculture Sector all schemes were financed for purchasing pumpsets for watering coconut cultivation. In livestock sector, 9 schemes were financed for purchasing milch cows, 16 for milch goats, 5 for constructing cattle sheds, and one for duck farming. In the fisheries 12 schemes have been financed for purchasing boats and nets, 4 schemes for purchasing boats alone and 3 schemes for purchasing nets.

In small scale industrial sector, 9 schemes were financed for sewing machines, 3 schemes for haircutting shops, one was to a carpenter to open a furniture shop and one for a sweet maker. In the tertiary sector, 2 schemes were financed for ferry boats, one for a cycle, one for light and sound shop and 2 schemes are financed for shell collection. Of the 17 different schemes, 6 schemes are self-employment schemes. They are schemes financed to purchase sewing machine, hair cutting shop, furniture shop, ferry boats, cycle, sweet making and light and sound. As a result of these self-employment schemes 17 beneficiaries benefited out of these schemes.

For the implementation of 17 schemes among 75 beneficiaries, a total amount of Rs. 2,01,832 has been distributed, in which credit portion amounted to Rs. 133,721.33 and subsidy portion Rs. 68,110.67. The average amount received by a beneficiary amounts to Rs. 2691.

According to scheme-wise distribution of assistance, pumpsets in agricultural sector received 4.91 per cent of the total assistance. Assistance to purchase milch cow constituted 13.13%, milch goat 8.52%, cattle sheds, 9.66% of the total assistance share for duck farming comes to 2.48%. In the fisheries sector, share to purchase boats and nets came to 24.77%, assistance to purchase boat alone constituted 1.49 per cent and for net 3.86 per cent. In the small scale industrial sector, share of sewing machine was 5.45 per cent, haircutting shop, 3.72 per cent, furniture shop 2.48 per cent and sweet maker 2.48 per cent. In the tertiary sector, ferry boat received 3.72 per cent of the total assistance, purchase of bicycle, 0.45 per cent, light and sound shop received 4.15 per cent of the assistance petty shows 2.23 per cent and shell collection received 3.72 per cent of the total assistance.

The scheme-wise analysis of IRDP beneficiaries reveals that livestock received the maximum assistance (34 per cent) followed by fisheries 30 per cent.

Who financed them ?

More than 51 per cent (51.33 per cent) of the total assistance distributed among the sample beneficiaries was by nationalised banks operating in Ernakulam district. Of the total assistance provided, Union Bank of India which is lead bank for the district distributed 43.86 per cent of assistance. Non-nationalised banks distributed 43.28 per cent of the total assistance among the sample beneficiaries, of which 32.66 per cent was distributed by the South Indian Bank Ltd., operating in the village. Harijan Welfare Society distributed 3.64 per cent and Land Mortgage Bank of Ernakulam, 1.74 per cent assistance.

What did IRDP achieve ?

After the institution of IRDP schemes, 20.6 per cent of families came above the poverty line. But, 79.4 per cent families are still below the poverty line. Before the implementation of the IRDP schemes, 97.33 per cent of the beneficiaries were receiving income less than Rs. 2500 per year. After receiving assistance, as a result of income from various schemes income distribution has changed favourably and now only 44 per cent are receiving less than Rs. 2500. Again, before the implementation of the schemes, 11.66 per cent of the beneficiaries were getting income between Rs. 2000 and Rs. 3000, after the implementation of the schemes, 62.67 per cent were getting income in between Rs. 2000 and Rs. 3000. Thus, we can see that IRDP has a strong impact on income generating and income distribution of the sample beneficiaries.

To evaluate the impact of IRDP schemes on the generation of employment, data regarding the employment position in the village before and after the schemes were implemented are collected. It was seen that total employment for sample beneficiaries before receiving IRDP assistance was 4040 man hours per month. After receiving IRDP assistance employment for the sample beneficiaries has increased to 7690 man hours per month. This shows that there has been an additional employment creation of 3650 man hours among different sample beneficiaries in different sectors. The sector-wise analysis of additional employment creation reveals that the schemes related to agriculture generated 90 man hours, livestock 810 man hours, small-scale industries 2000 man hours and tertiary sector 750 man hours. Various schemes in small-scale industries generated maximum employment 54.79 per cent. In fisheries sector additional employment created was almost zero, because all beneficiaries were previously employed with some others, and they received assistance they managed to get boat and net of their own. Therefore, there is no additional employment creation. Even though livestock and fisheries received 33.79 per cent and 30.12 per cent of the total assistance respectively, the additional employment created from these sectors were very low. Even though the sectorwise analysis of employment generation in comparison with the percentage

of assistance given are not satisfactory, the share contributed by the IRDP schemes total employment of sample beneficiaries are appreciable.

Regular loan repayment

Almost 83 per cent of the 75 beneficiaries are repaying the loan regularly. Of the 83 per cent of the beneficiaries 54 per cent has no difficulty in repaying the loan, remaining beneficiaries are of the opinion that since monthly instalments are very high and not at all related to the generation of income from schemes, they have difficulties in repaying the loan. Of the 75 sample beneficiaries, 7 have already repaid the loan. Of the total credit distributed among the sample beneficiaries Rs. 50,000 have been repaid. Five beneficiaries have not started repaying the loan because of various reasons.

What do the beneficiaries think ?

Of the 75 beneficiaries 3 per cent of them have very good opinion about the programme, remaining 5 per cent are indifferent towards it. Sixty-two beneficiaries are interested in availing the loan again. Of these 62 beneficiaries, 11 had already applied for another scheme a month before. Of the 75 beneficiaries, 6 are indifferent and 7 are not interested in availing the facility again because of time delay and procedures involved in it. From the above analysis it is evident that IRDP schemes have good impact on reducing poverty, employment generation and raising the pace of rural development.

Even though IRDP has got favourable impact on the way to ameliorate the life of rural people, it has certain gaps and defects in the process of implementation. The defects and weaknesses could be overcome by some efforts on the part of the authorities.

One such defect is the centrally assigned target and resource allocation. Irrespective of the resource potential of a block, each block is supposed to lift 3000 families above the poverty line. The country-wide target for the Sixth Plan period is 15 million persons. Since targets were reviewed each month, the task of realising the target falls on Block level and field workers. This often has disastrous consequences.

The inability of the various developmental and financing agencies to work in unison results in their poor performance. The relationship between financing institutions are not smooth. As a result, there is lot of delay in sanctioning and implementing schemes.

The initial step in the implementation of IRDP is the conduct of the household survey. But the survey has not been conducted systematically on the Block level. Personal bias of the VEO, influence of MLAs and local politicians, bribe etc., often affects the selection of the beneficiaries.

Need for technical expertise

The VEO, often do not get the required technical advice from veterinary doctors, industrial extension officials etc., for preparing technically viable schemes and in giving necessary services after the purchase of assets. The available technical staff are prone to

extra considerations. Of the 75 beneficiaries surveyed, 30 purchased milch animals. All these beneficiaries have to give extra consideration ranging from Rs. 25 to Rs. 30 for testing the animals and issuing certificates. In five cases, certificates issued were found to be false. Three animals were found to be affected by paralysis and two of them died within a week after they were purchased. Moreover, the affected beneficiaries were the poorest among the sample beneficiaries. Therefore, in the case of milch animals, the block authorities should arrange the animals, so that the quality of the animals can be maintained.

In selecting schemes, there is no adherence to a democratic process either in theory or in practice. The various schemes are determined by the implementing agencies. Moreover, in selecting the first scheme for a household, there had been instances where the most suitable scheme has not been implemented.

The authorised suppliers of goods are quoting rates above their actual prices for their goods under the IRDP schemes. This is true in the case of milch animals too. So in many cases a good portion of the subsidy is taken away by the dealers of these goods. In these circumstances, the income generated is the in proportion to the amounts invested in such scheme.

Another difficulty is in the selection of Scheduled Castes/Scheduled Tribes and other beneficiaries from the weaker sections and the implementation on IRDP schemes for them. Most of those people and living in slums having only 4 or 5 per cents of land-lords are landless agricultural labourers. The financing agencies hesitate to give credit to these persons beyond certain limits, which are very low.

The financing agencies are asking for too much securities for sanctioning credit, neglecting the rules of government. Even for the same amount and from the same bank and branch, there is no uniformity for security.

Whenever there are dues against the loan of the first scheme, the banks do not provide loan for the second scheme. This affects the entire operation of the scheme.

Though banks are persuaded to extend finance liberally under IRDP, the individual branch managers either encourage or discourage application under this category. To avoid certain rigidities inherent in the scheme, the following suggestions are made.

The selection criteria for beneficiaries, states that persons with annual income below Rs. 3,500 are eligible for assistance. But the criteria should be widened. In Kerala, an average casual labourer gets daily wages of Rs. 20. Therefore his annual income will be around Rs. 4500 and he is above the poverty line. In addition to the above criterion, poverty line in real terms (in terms of food intake) must also be considered for identifying beneficiaries. Moreover it is very easy to show that annual income is less than Rs. 3,500 because income certificates are issued on

the basis of ration cards, which is not at all a correct indicator.

Before recommending a beneficiary to the bank, the VEOs should make a thorough study of the identified beneficiary. The selected scheme should be really an income generating asset.

There must be insurance to all assets created under IRDP schemes, especially in the case of livestock.

Most of the villagers are illiterate and therefore, they are ignorant of these schemes. Therefore, more credit camps should be organised and the VEO should see that more people are aware of these schemes. □

(Continued from page 16)

among those who were attending the tailoring classes as they could earn money by way of taking up the job stitching of clothes, etc. It also helped them to develop their skills in kitchen-gardening and to improve their poultry, tailoring and handicrafts. Sanitation and health aspects of the village were also taken care of due to their increased awareness about their own health. They also evinced a keen interest in knowing more and more about the affairs of the country and world events.

Many of the office-bearers of these mahila mandals felt that they can work more vigorously if more funds are available for their activities. Some of the members felt that mahila mandals should conduct short-term and condensed courses in teaching school subjects for the benefit of the scheduled caste and backward class students to improve their educational levels.

It is also interesting to note that those mahila mandals which were well established and were getting private grants were found to function more effectively and as and when the grants got reduced the work also dwindled for want of funds. The funds that they are getting from the government in the form of grants were not enough to fulfil the objectives of the mahila mandals. The committee members hoped to improve the financial status of mahila mandals in the years to come through their own efforts in addition to government grants.

Specialised voluntary agencies like mahila mandals show great promise in improving the socio-economic status of rural women through their activities. They have also demonstrated that how keen and sincere interest of the organisers of mahila mandals can go a long way in helping rural women to not only acquire new skills but also enable them to create a congenial atmosphere at home and outside for a better life.

Planning for the poor

P. P. Pillai

Let the Seventh Plan have only two objectives, the removal of poverty and eradication of unemployment suggests the author. The rise in G.N.P. has no meaning for those living below poverty line, he adds.

THERE IS NO exaggeration in saying that on a perusal of the plan documents in the past, one gets lost in the too many objectives laid down in them, very often mutually inconsistent. We have, for example, as many as ten objectives in the Sixth Plan. The more the number of objectives, the more vague they remain and nobody can easily audit the achievements of these objectives. It is also noteworthy that the basic objectives of our plans have not changed much since the formulation of the First Plan.

The cry for the eradication of poverty and prevention of concentration of wealth started echoing in India through the National Planning Committee of the All India National Congress as early as in 1938. Poverty and unemployment were considered all these years as the basic issues to be reckoned within any strategy of national economic development in India. However, both poverty and unemployment continue to perpetuate and co-exist with 'growth'.

Impressive growth rate

No doubt, Indian economy had somewhat impressive record of growth during the past plan periods. The Gross National Product (GNP) at 1970-71 prices rose at an annual rate of 3.5 per cent during 1950-51 to 1978-79 and the per capita income at 1.3 per cent. The rate of Gross Capital Formation rose from 14.3 per cent of the GNP during the First Five Year Plan to 23.2 per cent, during the Sixth Plan. The agricultural output increased at an annual rate of 2.7 per cent during this period. The production of foodgrains increased substantially from 16 million tonnes in

1950-51 to 132 million tonnes in 1980-81 and to 142 million tonnes in 1983-84. Despite these and similar records of 'growth', measured in terms of several macro-economic variables, poverty and unemployment situation in the country has not improved.

As per available statistics, the backlog of unemployed rose from 3.3 million in 1950-51 to 18.3 million in 1972-73. According to NSS estimates, rural male unemployment was 2.59 per cent of the labour force in 1960-61 (NSS 16th round), but this rose to 7.32 per cent in 1977 (NSS 32nd round), while rural female unemployment, which stood at 6.49 per cent in 1960-61, went up to 8.90 per cent in 1977. Similarly the urban male unemployment rose from 2.47 per cent to 9.86 per cent and urban female unemployment from 2.21 per cent to 16.31 per cent during this period.

With regard to the extent of poverty, the Sixth plan Document has admitted that 48 per cent of the population were below poverty line in 1980-81, the cut-off point 1979-80 prices being Rs. 77 per capita per month for rural population and Rs. 88 for urban population.

Prof. V. K. R. V. Rao (1979) has given three alternative estimates of percentage of population below the poverty line on the basis of norms suggested by Bardhan (1974), Dandekar and Rath (1947) and Ashok Rudra (1974). According to the first, the percentage of rural population below the poverty line increased from 29.80 per cent in 1960-61 to 34.59 per cent in 1973-84, and according to another estimate from 34.73 per cent to 40.56 per cent. According to the third estimate, it rose from 66.77 per cent to 70.74 per cent during the period from 1960-61 to 1973-74.

Despite the differences in these estimates, all of them are indicative of the increasing mass poverty in our country along with the GNP. Thus, despite the relatively impressive 'growth' of the economy, poverty and unemployment situation in the country has only worsened. A rising growth rate is not at all a guarantee against worsening mass poverty and unemployment.

It is true that objective of social justice was included in the list of objectives. It is also true that it just re-

maintained in the periphery and the development strategy essentially remained growth-oriented. We were preoccupied with investment-oriented western growth theories and growth-oriented development strategies in the previous plans.

Should we not, therefore, think for a while, at least now at the time of formulation of the Seventh Five Year Plan, whether we have been really committed to the various objectives in the earlier plans and whether we have not been adding the objectives of poverty alleviation and eradication of unemployment in the plans just to serve as a thin veneer on top of the other objectives?

Only two objectives

If we really intend to remove mass poverty and unemployment, why not we have in the Seventh Plan two and only two objectives, viz., removal of poverty and eradication of unemployment and try to achieve them. Let us not bother about the various other objectives in terms of GNP growth, etc. Growth rates of GNP, savings, capital formation etc., however large they may be, have no meaning to the masses, if they still suffer from poverty and unemployment.

The development strategy followed in the earlier plans is inadequate to achieve the above objectives as this strategy is dictated by capital-oriented macro theories of development in which distributive justice

has no explicit place at all. Moreover, the top-down approach in the plans results in unrealistic programmes at the local levels which do not attract enough local support or arouse sufficient local enthusiasm among the masses.

The basic reason why none of the many old or on-going programmes directed towards achieving distributive justice such as minimum needs programmes, 20-point programmes, the special rural development programmes like SFDA/MFAL, IRDP and, of late, DRDA, NREP, etc. could deliver the goods of the desired order is that all these programmes lacked the real participation of the masses at the local levels of implementation.

Planning, if it is really meant for the masses, should begin at the village/Panchayat level, after identifying the basic needs of the people of the locality and the resource endowments at the micro-level. The people should be got involved in the formulation of the plan itself so as to commit them for its implementation. In fact discussions on plan formulation should be organised concurrently at the Panchayat level with those at the national level. The elected local bodies, voluntary organisations, local offices of political parties, local M. L. As etc. should make a combined and concerted effort to identify and list out the really unemployed and also the poor households in their area and suggest local level programmes, on the basis of the local needs and resources. □

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Towards self-reliance in mining machinery

S.V. Ali and P. N. Sahi

Emphasising the need for evolving self-sufficiency in the manufacture of mining machinery, the author calls upon the mining equipment manufacturers to strengthen their Research and Development efforts. They should also explore the possibility for effective coordination and use of developing technology for evolving new designs.

INDIA IS ENDOWED with enormous mineral resources most of which still lie buried untouched. There is, therefore, an excellent perspective for the growth of mineral exploitation. Speedy development of the mining industry in a planned manner has been one of the important major objectives of our planning process. We produce about 80 minerals. The ores including fuel, atomic and minor minerals. The gross value of production of minerals other than minor minerals and atomic minerals increased from Rs. 180 crores during 1961 to about Rs. 4,900 crores during 1982.

Systematic and scientific attempt was lacking during the pre-independence era for the development of mining industry. As against the smaller mines of pre-independence times, bigger and bigger mines are being designed in the country. Although there are mines in India which produce a few hundreds of tonnes per year, there are operations such as, Kudremukh iron-ore mine which was designed to produce 20.6 million tonnes of r.o.m. per annum with the help of largest ever equipment used in Indian mines worth about Rs. 260 crores. In the perspective, as the need for larger and larger quantities of minerals raw-material develops, bigger mines would have to be designed with the most modern available technology

in order to remain competitive in the mining industry. The age-old pick-mining and head-loading will be replaced by modern mechanised methods even at a faster pace than the present one.

Present Capability

Appreciable competence in the field such as mine planning, design and operation has been achieved in the country. However, the same cannot be said with regard to the manufacture of mining equipment of various sizes and specifications. A lot of mining equipment is still being imported. For equipments where it has been possible to achieve some kind of standardisation and large scale production and for which adequate domestic market is available we have developed reasonable manufacturing competence and capacity. These include, jack hammers, blast hole drills, drill rods, hoists, locomotives, scrapers mine cars, excavators, shovels, rippers, dumpers; draglines : bulldozers, etc.

According to a survey carried out in non-coal mines, the most commonly used shovels in Indian mines are 1.17 to 2.30 m³ size which constitute about half of the shovel fleet deployed. Around 28 per cent dumpers in use are less than 10 tonnes capacity; and those exceeding 40 tonnes are about 12 per cent. And only about 28.5 per cent of locomotives used in our mines, have horse power more than 200; while about 26 per cent have horse power less than 100.

According to one study, we have imported mining equipment by and large because of the fact that the requirement was of special specifications, and that the equipments were not required in large numbers sufficient for creating the capacity within the country. There was also not much of the replacement demand for such equipment. The other considerations for importing mining equipment has been the possibility of obtaining a quick delivery schedule from foreign

suppliers compared with Indian suppliers, and at times the technology adopted for mining was different which could not make use of the indigenous equipment.

Indian manufacturers have not considered it feasible to manufacture some of the mining equipment for which although they had the capability and capacity to manufacture, there was limited domestic demand.

The equipment that have been imported because of non-availability in the indigenous market included, track dozers, blast hole drills of large diameter, fast shaft sinking equipment, winders of various sizes, raise climbers, mobile breakers, locomotives, large capacity LHD's large conveyors shovels of large capacity, CAVO loaders, large size dumpers, tunneling equipment, etc. During the year 1982-83, equipment over Rs. 40 crores was imported. This included drills of large diameter, electric and hydraulic shovels, conveyors, road headers, etc. or coal mining.

Indigenous capacity

Over the last few years, the production pattern of indigenous mining equipment indicates a continuous growth. This is evident from the following table :

Year	Rs. crores
1977 .	18
1978 .	24
1979	30
1980	35
1981 .	43
1982 .	48

Following is the installed capacity of some of the surface equipment :

	Capacity in numbers	
	Licensed	Installed
1. Excavators and Draglines	380	365
2. Crawler Tractors/Dozers	2040	1177
3. Dumpers	1004	685
4. Loaders	665	590
5. Scrapers	236	78

While most of the indigenous mining equipment manufacturing concerns have diversified operations, some of these manufacture substantial mining equipment. An attempt has been made to manufacture some of the mining equipment, which has so far been imported, by some of the indigenous manufacturers. However, it has been found that the equipment manufactured indigenously, has much higher operating cost compared to the imported equipment mainly on account of higher requirement of compressed air.

Future requirement

Future requirement of mining machinery of various sizes and specifications would depend upon the production programme of the mining industry. Production target for coal for 1984-85 has been fixed at around 165 million tonnes. About 57 per cent has been planned to be produced from the new mines;

and about 43 per cent would be contributed by the existing mines. Underground mines would share about 55 per cent of the target and about 45 per cent is expected from the opencast mines. The target for 1989-90 has been placed around 240 million tonnes; and coal production is anticipated to be around 325 million tonnes during 1994-95 and 400 million tonnes during 2000 A.D.

In order to achieve these targets, a number of coal mines are under construction; and quite a large number have to be opened. It is anticipated that the new mines will be mostly of large sizes and would use the most modern technology. Many of these mines are expected to make use of the integrated long-well systems with powered supports. Besides, expansion and modernisation of the existing mines would have to be carried out, which is anticipated to generate quite a substantial replacement demand for mining equipment.

For underground coal mine, equipments such as coal cutters, road headers, shearers, long wall face supports trolley wire locomotives, etc. would be required. The equipment for surface coal mining will include shovels, dumpers, draglines, hydraulic excavators, battery locomotives, etc.

In the non-coal sector, the total production of minerals and ores is anticipated to be around 135 million tonnes by 1984-85 which is expected to grow to 175 million tonnes in 1989-90. During 1994-95, this figure is likely to touch 230 million tonnes. This increase in production is anticipated to be met by the projects which are likely to spillover to the Seventh Plan from the Sixth Plan, and from the new projects which would be taken up in the Seventh Plan and thereafter.

These projects are Panchpatmali bauxite mine (NALCO), Gandhamardan bauxite mine (BALCO), Baroi and Rampura-Agucha lead-zinc mines (HZL), expansion of Rakha, Surda, and Kendadih copper mines (HCL), Machkot-dolomite mines (NMDC), iron-ore mines at Meghataburu (BSL) and Bailadila 11 C (NMDC), limestone mines at Bhavanathpur (BSL), Lambidhar mine (UPSMDC), etc. A large number of mining projects are on the anvil for the Seventh Plan. These include Gurubathan lead-zinc mine (West Bengal), Ambamata, lead-zinc mine (GMDC), Basantgarh and Akwari Copper Mines, Jhamarkota rock phosphate mine, and Degana and Sirohi tungsten mine in Rajasthan, Chicargunta and Mallappakonda gold mine (BGML), etc.

The requirement of mining equipment for copper mines during the next decade or so would be of the equipments such as high capacity DTH rotary drills capable of making large blast holes high capacity dumpers and front-end loaders, twin-boom hydraulic drill jumbos, electric and LHDs, and 14 t trolley wire locos. For lead-zinc projects, the requirement would be for equipments such as bigger shovels, front-end loaders, 60 t dumpers, 225 mm rotary drills, etc. Bauxite mines may require hydraulic shovels for undulating floors. For breaking big boulders in the bauxite mine, hydraulic rock breakers may be used.

During the next 10 to 15 years time, replacement demand for mining equipment would be generated. This demand is going to be substantial, especially from those projects which are quite old and where this aspect perhaps has been somehow overlooked. In some of the projects such as Kudremukh, replacement of equipment would have to be provided because of ageing of the equipment.

Strength and Weakness

In order to take care of the future requirement of mining equipment, we would have to look into the benefits and weaknesses that are there in the system today. The main strength that we have in the system today is the fact that with the infrastructure and industrial base already set up and diversified, the requirement for capital goods and engineering goods is being met indigenously to a large extent. By and large, the same holds good for mining machinery also.

On the one hand our installed capacity for the manufacture of mining equipment has remained under-utilised, we continue to import certain equipment on the other hand. This is being done for a number of reasons. Projects implemented under aid from abroad are invariably coupled with supply of equipment. This has been working against stimulation of demand for the indigenous manufacturers. Many a times it has been noticed that mining equipment is imported which have marginally different specifications. Sometimes inadequate lead time is also the criteria for imports. Recently, 15 numbers of 85 dumpers have been imported from Komatsu. These could have been manufactured by some of the Indian manufacturers. The import has been pleaded on the basis of urgency and lower prices quoted by Komatsu. It may not be correct to say that there is a deliberate attempt to place purchase orders with the foreign suppliers by bunching demand together to multiply the supply requirement beyond the capacity of Indian manufacturers. The indigenous manufacturers quote delivery schedule which range from 25 to 30 months even for certain common items for which foreign suppliers quote only 12 months or so. This fact has compelled users to go to foreign suppliers many a time. The indigenous manufacturers would have to quote smaller delivery schedule which compare very well with the foreign suppliers in order to stimulate the demand for indigenous mining equipment. Experience has shown that by and large the foreign suppliers adhere to their delivery schedules; while this is not so in case of the indigenous manufacturers.

We have not been able to keep pace with the technological development that is taking place elsewhere in the world. In the present technological era what was accepted yesterday as an innovation has become a practice today and is destined to be obsolete tomorrow. This holds good for mining machinery also which is undergoing a continuous change as far as design and sizes are concerned incorporating more of automation and speed. In our context, a certain gap is perceived between the technology desired by users and the technology turned out by the machinery manufacturing industry. This indicates that there is an urgent further need for technology upgradation, which has to be a

subject of continuous study, investigations, research and development.

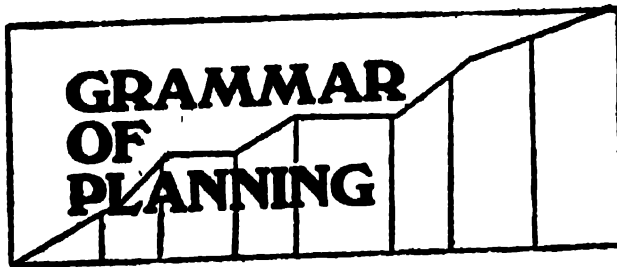
Prima facie standardisation and upgrading of technology may appear to be contradictory, but in actual practice this is not so, since both of them contribute to the development of capability for the manufacture of mining equipment, and do not run counter to each other. The delicate balance between technology upgradation and standardisation have to be realised. The experience indicates that often it happens that even before the equipment have rolled out from the process line, the demand for something bigger gets cultivated. Therefore, it would be necessary for the buyers to see that the manufacturers should be allowed to stay with a particular size of mining equipment for a reasonable period of time to allow them the gains of economics of batch production. If there are frequent changes in the sizes of equipment, it may effect the developmental efforts that the indigenous mining equipment manufacturer might put in.

Experience indicates that in some mines, equipments of various sizes, makes and brands are being deployed. This makes maintenance extremely difficult. It also results into unnecessary inventory built up. According to a survey carried out in limestone mines, it was noticed that in a mine where six shovels were operating, only two were of similar size and four were of different sizes. However, there appears to be a declining trend in the deployment of equipment in such a manner.

Fluctuations in the demand for mining machinery is quite natural and certain bunching is unavoidable. It is only the violent fluctuation in the demand of mining equipment which undermines capacity utilisation rather seriously; and it also sometimes results in excess work on the capacity. Therefore, there appears to be a need for making use of better forecasting techniques in assessing the demand for the mining equipments.

There is a need for proper maintenance of equipment and service facilities at site. This would call for improving the maintenance skills of the staff deployed in mines. Manufacturers should consider opening up of small workshops at the centres of mining activity. These workshops should keep adequate stocks of essential stores so that repairs and maintenance could be attended to without loss of time.

The R & D efforts, no doubt are in progress at various institutions and organisations including in-house laboratories of the manufacturers. However, co-ordinated efforts are lacking to achieve the common objective of updating of technologies and designs of mining equipment. As a matter of policy and programme the mining equipment manufacturers should further strengthen their R&D efforts and explore the possibility of setting up of a working mechanism to develop effective coordination for the use of R & D in developing technology, and evolving new designs. □



A Serialisation **6**

P.R. Dubhashi

The district and local planning

Following the 'spatial planning' which is built round the concept of area development (see last issue), the author explains here the importance of district and local planning. He calls upon the administrative machinery, the local government institutions and the leaders of the local society to come together on the planning forum and combine their intellectual power and thinking faculties with their intimate knowledge of local area and community, to help formulate more realistic plans for local areas.

INSPITE OF the importance accorded to the local planning, decentralised planning or planning from below in successive plan documents in India, the actual performance in respect of preparation of local plans has not been satisfactory. During the Second Five Year Plan, an attempt was made to prepare village plans first and then out of the village plans to prepare taluka or block plans and out of the taluka or block plans to evolve a district plan which in turn would be the basis of state plan and the national plan as a whole. This approach, however, never succeeded and indeed was hardly given even a proper trial. What came out of the exercise were long lists of requirements at the village level without any possibility of getting any adequate financial resources to meet these requirements.

The reasons for the failure of this exercise are apparent. The village per se, as an individual unit is hardly a viable unit for planning and development. Prof. John P. Lewis, the American economist described this preoccupation with village planning as mere

'villagism' which must be considered to be inconsistent with any rational or viable planning. Planning cannot attempt to provide self-sufficiency for every village. Planning must have a broader perspective and cannot be contained within the narrow confines of the single village economy. Planning has to be a general and comprehensive process for a much larger area-if not the nation at least the state or the region. Village, therefore, must find a place in the overall process of economic development of the region. In this process, some small villages may even disappear. There can, therefore, be no successful micro-planning at the village level at all. The economic fortune of the village is linked up with a much bigger micro plan.

Block level planning

If the village could not be the unit of horizontal planning then what other area could be? After the advent of community development programme in 1953, it was advocated that the block consisting of about a hundred villages should be the unit of planning and development. The block budget consisting in the initial year of the CD programme of some Rs. 15.00 lakhs with allocations for various sectors like agriculture, animal husbandry, irrigation, social education, youth development, rural industries, co-operative development, etc., provided nucleus for planning at the block level. It was expected that these resources would be supplemented by the departmental funds and public contributions. So much for the resources side. As regards the requirements, the block development programme began with a survey of every village and on the basis of these village surveys a block plan of requirements was to be chalked out. This exercise of horizontal planning at the block level was carried out during the first ten years of community development programme. This experience, however, showed that the idea of block as a unit for planning and development had not completely materialised. The development activity of the block level was confined, in the main, to the block budget. Even

the plan funds for other departments were not supplemented with it. After the expiry of ten years of the the period of community development programme, even the block budget disappeared. The panchayat samitis, the elected rural local self-government institutions at the block level, were not able to raise any material resources to augment substantially the development plans at the block level, and thus after the expiry of block period, the block organisation was left with limited number of schemes implemented by government at the block level.

District planning

The concept of block as the unit of planning and development was also related to the structure of the panchayat samiti at the block level. It is true that the block was chosen as a unit of planning and development, the idea was that of the three tier local self-government institutions or panchayati raj institutions, at the district, block and village levels. Out of these, panchayat samiti at the block level should be the most crucial agency for local planning. However, later on when, in the states of Maharashtra and Gujarat, district was chosen as a more viable unit for planning and development, the zilla parishad emerged as the most important local development agency. The development plans at the district level were, therefore, attempted in all those states where zilla parishad was the most effective unit. Zilla Parishad had more resources, more competent technical staff and therefore had greater strength to attempt planning for development. However, the nature of planning attempted at the district level by the zilla parishads was on the same lines as that attempted by the panchayat samitis at the block level. It is true that the local sector at the zilla parishad level attempted to cover a much larger spectrum of schemes of development but even then mere combination of schemes within the budget of the zilla parishad and the allocations of the state government at the district level could not be considered to be an adequate arrangement of horizontal planning at the district level.

The unsatisfactory nature of the district planning has been recognised and some thought has been given by economists, planners and administrators to this subject.

One of India's leading economists, the late Prof. D. R. Gadgil gave a good deal thought to this subject which he covered in his R. R. Kale Memorial Lectures on the subject of District Planning. Under his guidance, a District Development Plan was being prepared for Wardha district. In evolving this plan, Prof. D. R. Gadgil worked out certain concepts regarding the framework of the district plan. He identified four principal components which must be part of the district plan, viz.,

- (i) Development of natural resources of the district,
- (ii) Development of infra-structure facilities,
- (iii) Development of productive employment in the field of agriculture and industry, and

(iv) Development of growth centres in the economy.

However, formulation of a horizontal district plan on such a basis would require adequate collection of data, interpretation of this data and formulation of concrete and feasible plans, programmes and schemes for the various components of the plan.

The district plan is a horizontal plan. It is, therefore, one form of 'Spatial Planning'. District plan formulated as a by-product of vertical plan is not the same thing as the 'Spatial Plan'. The 'Spatial Plan' concentrates on the analysis of the local resources and works out measures for the maximum utilisation of these resources, for the production of needed goods and services. 'Spatial planning' combines geographical, demographical and economic approaches in the subject of planning.

Spatial planning

In working out the spatial plan, the economists divide the aggregate economy into regions which are homogenous in characteristics—natural, physical, sociological, economic, etc. Thus, river valley areas, or urban rural areas under the influence of a city centre or a tribal area are examples of the earmarking of special areas from the point of view of spatial planning. The working of Tennessee Valley Authority under David Lilienthal has provided a pioneering example of spatial planning. In India also, in the Fifth Five Year Plan, 55 areas under the major irrigation projects have been selected for command area development. The major irrigation projects in this country created substantial irrigation potential but its utilisation was somewhat tardy in the absence of integrated irrigation development plan. The concept is therefore now accepted that an integrated area development plan must be prepared for the command area. Such integrated command area irrigation development plans will include a series of inter-connected items like the construction of canals, distributaries, water courses and field channels and drops, levelling and reshaping of land, drainage facilities, agriculture extension, training of farmers in irrigation development, prescription of an appropriate cropping pattern, supply of agricultural inputs, rural communication, marketing, storage, processing and town and country planning in the developing area. The irrigation development plan has necessarily to be evolved with the cooperative and conjoint efforts of the various departments like PWD, agriculture, cooperation, revenue, development, etc.

Another example of such a regional planning is the Drought Prone Area Programme. Some 70 districts in India are in the rain-shadow area and are prone to scarcity and famine. The old approach of extension and remission of land revenue, grant of tagai (or takavi) and supply of foodgrains at concessional rates is no longer found adequate from the point of view of the objective of providing permanent insurance to these areas from the effect of drought. A programme has, therefore, been contemplated to restore ecological balance in these drought-prone areas by the development of soil and water resources in such a manner as to provide permanent insurance to these areas from the onset of drought.

A programme of this sort would include the identification of drought-prone areas, identification of water-shed areas within this dry zone, an intensive attempt in these water-shed areas to conserve water and moisture and protect soil through a minor irrigation, afforestation including planting wind breakers, soil conservation, pasture development, etc., and developing subsidiary occupations which are suitable for such dry zones, like animal husbandry, sheep rearing, sericulture, fishery, horticulture, etc. The drought-prone areas may run across several districts.

A third example of horizontal planning are the special programmes for areas along the western ghats which not only extend to several districts within the state but also over several states of Maharashtra, Karnataka and Kerala. Such horizontal plans for natural regions would be receiving increasing attention in the years to come and would form part of local planning.

Horizontal planning

Horizontal planning could exist not only for special areas with special physical characteristics, like agro-climatic conditions and homogeneity of soil and water resources, but would also exist for special groups of population who need special attention because of their neglect in the past.

The leading example of such planning is the Project for Small Farmers and Marginal Farmers and Agricultural Labourers. Special development agencies, in the shape of registered societies, have been established for formulation and execution of such projects in selected districts. These agencies prepare horizontal plans of an integrated sort for dealing with special problems of small and marginal farmers. The programme for the small farmers include their enrolment as members of cooperative societies, giving them short term, medium term and long term loans, subsidising 25 per cent of the loan, providing common projects like a common irrigation well, common fencing or custom service centre and providing supplementary occupations like horticulture and dairy.

The concept of spatial planning is also linked with another approach evolved by the demographers, viz., that of identification of growth centres. The basic idea behind this is that development does not take place without some pattern and the pattern is that of a series of linked centres of growth, each growth centre providing a stimulus to the surrounding areas. An approach to planning which does not take into account the growth centres is bound to lose sight of the dynamics of economic development. The concepts of growth centre has received a great deal of attention from the regional scientists and considerable literature has grown. An attempt has also been made to apply these concepts of regional and district planning and to evolve concrete plans which make these growth centres the nodal points in the framework of planning. This approach envisages a planning hierarchy of growth centres. Four hierarchies of centres have been distinguished :

- (i) Central village providing minimum facilities to a cluster of villages like primary school or a health dispensary, etc.

- (ii) A service centre providing all basic facilities like a market centre.

- (iii) A growth point providing market-cum-service centre to 5—10 service centres of category, (ii). Such a growth point can provide scope for industrial growth.

- (iv) A growth centre serving 5—10 growth points with a number of secondary and tertiary activities and specialised facilities. These growth centres provide consumer products both finished and semi-finished of the lower hierarchy. They have a large number of processing activities. Planning for such growth centres would ensure best use of investment in a region since—

- (a) it concentrates resources in growth centres in such a manner as to have the maximum spread effect, and

- (b) they take into account linkages between the growth centres.

A pilot research project in growth centres was implemented as a Centrally-sponsored scheme during Fourth Plan period. The scheme envisaged setting up of a total of 20 research and investigation cells to evolve techniques and the methodology for the development of emerging and potential growth centres by providing social and economic overheads in delineated areas in terms of a carefully prepared inventory of local needs.

Increasing role of banks

A major development in recent years has been the increasing role that the banks have been called to play in the socio-economic development of our country, particularly, after the nationalisation of the major banks. Before the introduction of social control and nationalisation, the banks were mostly concentrating in the urban or metropolitan centre and their involvement in the planning was somewhat limited. Now the concept of planning includes a combination of budgetary resources with banking resources. Banks are expected to provide institutional finance for economic development, even in the rural areas. The responsibility for such planning for area development through banking resources has been entrusted to the 'lead bank' which is expected to survey the area and identify the opportunities for economic development. Such credit plans by the banking institutions have to be inextricably and intimately related to the economic plan. The credit plan would provide extension of available banking funds to priority projects and needy individuals be they small and marginal farmers or artisans. Such a credit plan must consist of economically viable projects since all banking funds have to be used on a commercial basis and have to be repaid with interest by the beneficiaries. There is a provision for lending by commercial banks at concessional rate of interest under the DIR (differential interest rate) scheme. Opportunities for use of banking funds would depend to a great extent on the facility made available by the general development plan in terms of techni-

cal assistance, organisational support and infrastructure facilities made available by the departmental and other agencies.

Even before the entry of the commercial banks in rural development, the cooperative banks were actively engaged in rural development. While the Primary Cooperative Credit Societies supported by the District Cooperative Central Banks provided short-term credit for seasonal agricultural operations, the Primary Land Development Banks (PLDB) supported by the Apex Bank and the Agricultural Refinance and Development Corporation (ARDC) provided long-term credit needed for investment in land in activities like soil conservation, land reclamation, land levelling, well digging, horticulture, etc. The ARDC and the International Development Association of the World Bank, which supported these projects, insisted on the PLD Banks adopting the area development approach.

Integrated district plans

The district plans will have to integrate all these different approaches and components within an overall framework. The following components will, therefore, have to find a place in an integrated district plan :

- (i) Identification and full utilisation of natural resources,
- (ii) Full utilisation of the manpower resources,
- (iii) Building institutions and organisations and using them for maximum productive effort,
- (iv) Mobilisation of efforts of financial institutions for mopping up savings and their productive investment,
- (v) Building up of infrastructure facilities,
- (vi) Identification and development of growth centres,
- (vii) Provision of minimum needs of social consumption, and
- (viii) Plan for technological development in rural areas.

Each of these elements would have to be incorporated in the area or horizontal development planning for a district.

Identification of natural resources

The natural resources of an area consist of the soil, water, minerals, forests and marine products. In the words of Dr. Swaminathan : "Of the highest priority is more intensive work on the preparation of an integrated inventory of land, water, mineral and other natural resources, area by area, and the development of scientific plans for land and water use." A district can conveniently be divided into planning units in accordance with the preponderant characteristics of the natural resources available and for each of such units plans could be devised. Apart from the extent and degree of certainty of rain-fall, the water resources available through the rivers and under-

ground water resources will have to be taken into account.

The soils also differ in their characteristics making it possible for different crops to be grown. The black soils are useful for cotton and perhaps wheat and sunflower while the red and light soils are good enough for millets and groundnut specially if the land is somewhat sandy. Thanks to the discovery of new varieties of short-duration seeds, it has been possible to grow more than one crop in a season. It is possible also to scientifically analyse the soils by taking soil samples. Cropping pattern and planning will have therefore to be made on the basis of a comprehensive understanding of soil, water and climatic conditions.

Just as an understanding of the soil resources is possible through soil survey and soil testing, the availability of ground water resources can also be assessed by ground water survey which is now being carried out comprehensively throughout the districts. The district plan, therefore, must take into account the ground water resources and programme the number of wells-dug or bore-that could be attempted on the basis of this water potential. In areas under major irrigation projects, conjunctive use of water resources can be attempted.

Planning for agriculture will have to be supplemented by planning for dairy, horticulture, sericulture, fishery and other supplementary occupations.

In all coastal areas, and the areas with large rivers and ponds, fishery development planning has to be attempted.

Development planning, whether for agriculture, animal husbandry or fishery, has far-reaching backward and forward effect. Thus, for planning for agriculture development, it is necessary to plan for a series of inputs like seeds, fertilisers, pesticides, implements, etc. Planning for horticulture also requires supply of saplings, suckers, etc. Planning for dairy requires supply of pedigree animals, artificial insemination centres, forage and feed for animals, veterinary services, etc. Similarly, planning for production must be accompanied by planning for marketing, storage and processing or else planning for production may face frustration.

It has been recently realised that planning for agriculture must also be the planning for different groups who participate in farming, viz., large farmers, small farmers, marginal farmers, tenants and agricultural labourers. It is first of all, necessary to identify the farmers belonging to the various groups and pay special attention to the small and marginal farmers and agricultural labourers. To the latter, both for supply of inputs and sale of output as well as for productive operations, special facilities on a group basis have to be provided. They have to be brought into the main stream of production.

The above mentioned analysis will show that though agriculture falls within the primary sector of the economy, planning for agriculture and allied productive occupations involves planning for secondary and

tertiary sectors in addition to planning in the primary sector. Agriculture development necessarily involves development of marketing and agro-processing industries, development of industry and supplying of agricultural inputs and development of social enterprises, like marketing and distribution, banking and insurance.

Utilisation of manpower resource

If land is the first factor of production, labour is the second. Labour, i.e., manpower resources need to be developed and utilised in a planned manner so as to get the maximum productive benefit from the skills and talents of the manpower. All the strength, the skill and the capacities of the manpower have to be fully utilised. It is true that most of the manpower is engaged in agriculture and possesses only traditional skills. But different agriculturists do specialise in different types of operations, there are some groups who specialise in horticulture, others in sheep, dairy development, etc. All these traditional skills have to be identified and will have to be further developed through a number of short duration training courses in modern technology, educational tours of the farmers and agriculture extension.

At the same time, skills of artisans will have also to be identified so as to make use of them for modernising agriculture. Agriculture requires new implements. These are not available but could be locally manufactured. The traditional artisans should be trained, organised and financed for production and supply of such agricultural implements like improved bullock cart, or seed and fertiliser drill, or the various implements required for re-shaping of land in irrigation command areas.

The technology of the future will demand collective action by farmers in a village or a water shed area for efficient adoption of modern techniques. Farmers and artisans must be trained in techniques of collective management so as to make the maximum use of manpower and natural resources.

Education has spread in rural areas and more educated manpower is now being available in the country side. Educated man seems out of place in rural surroundings. However, if properly motivated and reoriented, he could be an asset in the rural areas. If the farmers' sons are educated in agriculture or veterinary services, they could be direct agents of change. Development plans may make use of the services of such educated men and after giving them necessary training put them into use in implementing the programmes of rural development. Unfortunately, there is less of advanced agriculture education and more of general higher education which is being availed of by the farmers' sons. But even here, the farmers' sons, though qualified with general degrees may work to build up rural institutions like agricultural workshops, cooperative societies, tractor and distribution centres, etc., rather than jostle for clerical posts in the cities. We must make full use of the knowledge of the available talents of the rural people. It has to be borne in mind that the industrial revolution was ushered in Great Britain not

through the efforts of modern scientists but through the innovations made by mechanics and artisans.

Productive effort

The entire development process may be looked upon as the end product of the efforts of individuals and institutions. A network of institutions are needed to initiate support for the development process. In the process of local planning, the institutions which are to play a prominent role are the following :

- (a) At the village level, the village panchayat, primary cooperative society or the newly set up farmers' service society and auxiliary institutions like the youth and women's clubs, etc.
- (b) At the Tehsil/block level, the tehsil/block development board, land development bank, branches of commercial banks, taluka agricultural produce marketing society, the Agricultural Produce Marketing Society (APMS), etc.
- (c) At the district level, the zila parishad, or district development council, district central cooperative bank, commercial banks, etc.

Each of these institutions has a definite role to play and each must prepare a development plan for its own area of activity. Thus, the village panchayat, the tehsil development board and the zila parishad or the district development council have to produce general development plan while the cooperative and the commercial banks have to prepare credit plans. The marketing society and the agricultural producing marketing societies have to produce marketing plans. Finally, youth and women's institutions and similar other institutions may prepare their plans limited to their purposes.

In addition, for the city and town areas, the corporations or the municipal councils have to produce plans for their areas and where there is the linkage effect, an integrated town and country plan must also be prepared.

Credit plans

The role of credit plans as complementary to the economic plan and the planning to be undertaken by the cooperative and banking institutions has been mentioned earlier. The cooperative credit institutions sometimes look upon themselves as mere lending institutions, channelising the credit reimbursed by the higher credit institutions reaching right up to the level of the RBI and the ARC. The commercial banks work only in a limited area around their centre. As a result, no attempt is made to assess the income generation in the local economy and the savings of the local community. The banking institutions must make an attempt to mop up savings that could be generated in the rural economy which in turn could be re-cycled through investment for the development of the economy. Such a complete circulation process consisting of income generation,

savings, investment and further generation of income has not yet been attempted for the rural economy, by the banking institutions, though it is a vital part of an integrated horizontal plan.

Infrastructure facilities

Development of agriculture, industry, marketing, processing and financing of an area is not possible without the infrastructure of roads and electricity.

Road plan, consisting of the national and state-high ways, inter-village communication and village roads, must be prepared and implemented in a phased manner. In the absence of such an integrated planning, it is seen that roads are taken and left half-way with stacks of metal lying unused. Another example is that even large villages surrounding a marketing centre remain unconnected by proper communication. Irrigation development is not possible without ayacut roads. Transport is rightly considered to be the crucial factor in the development of the economy. The green revolution in Punjab is attributed not only to productive effort but also to the existence of a good network of rural communication.

Rural electrification is crucial for agriculture development, industrial development and improvement of the style of rural life. While some areas have been fully covered through rural electrification, many others are in much inferior position. Regional and local planning should bring out such regional disparities and correct them.

Growth centres

The concept of hierarchy of centres has been discussed earlier. The nodal points in the rural economy consist of city and town marketing centres which many a time coincide with the taluka headquarters but would also include other municipal towns and large villages in the area. A forward looking plan should be prepared for each of the centres so that they provide the focus of the development of the area around such centres.

Minimum needs of social consumption

All the items dealt with so far, have aimed at the development of resources of the local economy. As these resources develop, they would automatically facilitate availability of goods and services and would provide gainful employment. However, in addition to the individual consumption of goods and services, there are certain items which are of the nature of social consumption and which have to be provided through general development plans. These items of social consumption include drinking water facilities, schools and health centres. These have vastly expanded in recent years and it is time to cover the areas which have been left out in the past.

Technological development

The scientists have realised that the research in science and technology should not be carried out merely on an all India basis but it is high time that the research is undertaken at the local level.

All these eight components must form necessary part of the local development plan. But these are complementary components. Each component no doubt must be developed as an item in its own right, but each must also be integrated with the other components. For example, development of natural and manpower resources should go together but the development of these resources would require infrastructure facilities and various other services and hence the plan for the development of natural resources and manpower resources must develop along with the plan for infrastructure facilities. In all aspects of integrated development, institutions like panchayat and cooperatives have to play a crucial role.

Such horizontal district plans cannot be formulated without certain degree of expertise in the technology of planning. It was felt that it would be difficult for a busy administrator, like the deputy commissioner/collector under continuous pressure of day-to-day work to find adequate time necessary for formulation of such a plan.

Attention was, therefore, given to the strengthening of the district machinery of planning by the appointment of the district planning officers and training them suitably in the techniques of district planning.

The person appointed as a district planner must combine in himself both academic and administrative talent. This is not easy to obtain.

Though the concepts of an integrated plan for local areas, as analysed, have not been unknown, we have yet to succeed in preparing an integrated development plan. We have to make continuous effort to get over the weaknesses in the planning mechanism, which have taken many forms. A lot of statistical data is generated but it is not always up-to-date, and even when it is available, it is not assimilated and linked up with design of development, because of the lack of capacity to use statistical data in an intelligent and meaningful manner for development planning. There are district statistical officers at the district and taluka level but they are engaged in the routine tasks of compilation of the data and sending it to their headquarters. They should be trained and motivated to use the data for local plan. The statistician must make himself useful to the administrator and the planner. But the planner and the administrator must have also the capacity to use the data. Apart from the officials like the deputy commissioner, the district planning officer and the district statistical officer, the other participants in the district planning machinery, viz., panchayats and cooperative institutions, have never taken interest in a rigorous process of local planning. Indeed, this indifference to local planning has to be found in the local community itself. The district headquarters have a number of educational institutions and competent people, students and teachers, natural scientists
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Seventh plan objectives approved

Yojana Correspondent

THE MAXIMUM POSSIBLE GENERATION of productive employment, attainment of self sufficiency in food at higher levels of consumption and reduction in infrastructural bottleneck and shortages and improved capacity utilisation and productivity throughout the economy are some of the objectives of the approach to the Seventh Plan, which was approved by the National Development Council at its meeting on 12th and 13th July, 1984.

The other objectives include the alleviation of poverty and a reduction in inter-class and inter-regional and rural urban disparities; a higher level of social consumption, particularly in education, health, nutrition, sanitation and housing; an enhancement in the degree of self-reliance through export promotion and import substitution; conservation of production and energy resources, ecological and environmental conservation; decentralisation of planning with full public participation in development, and integration of science and technology into the main stream of development planning.

According to the approach paper, objectives will be sought to be achieved through a result-oriented approach in which a number of well-defined major mission will be identified and implemented through coordinated inter-agency projects. The Seventh Plan will seek to launch the country on the path of further development, geared to equity, removal of deprivation and a tangible rise in levels of social welfare and social consumption, especially of the disadvantaged sections.

The strategy will be built on the basis of an emphasis on *food, work and productivity* as directed by the Prime Minister, Mrs. Indira Gandhi, while presiding over the NDC meeting.

Growth rate, plan size and resources

The projected growth rate of the Seventh Plan will be a little over 5 per cent. This will help contain

inflationary pressures and lead to import substitution in sectors like crude oil, food grains and edible oils besides generating employment and income for the poor, especially in the less developed regions.

The plan will be based on the assumption of a 26 per cent savings rate which has already been achieved.

Aggregate investment over the five years will be of the order of Rs. 320,000 crores including public investment of about Rs. 150,000 crores at 1984-85 prices. The public sector outlay in the plan period will be of the order of Rs. 180,000 crores.

The required resources will have to be mobilised in a manner which minimises dependence on external sources or on deficit financing which has a high inflationary potential. The hallmark of this objective will be based on generation of internal resources.

The strategy outlined in the approach to the Seventh Plan is intended to result in lowering of the capital-output ratio in view of likely constraint of resources in real terms.

Balance of payments

The plan will take into account the prospect of considerably diminished inflow of concessional financial assistance from abroad, sizeable debt service obligation, and global environment where interest rates will normally be high with only limited possibilities of any sharp acceleration in the volume of export growth. The strategy, therefore, to be evolved will aim at depending largely on faster growth in exports, and on import substitution.

Greater priority will be given to attaining self-sufficiency and self-reliance in areas such as oilseeds, petroleum, petroleum products and a whole range of items which account for large imports or where the content of skilled labour is high.

A growth rate of population of 1.8 per cent per annum is assumed for the plan period. The estimated population in the terminal year of the Plan is pegged at 803 million.

Guiding principles

The guiding principles of the Seventh Plan will continue to be growth, equity and social justice, self-reliance, improved efficiency and productivity. Within this framework, the movement towards social justice will be faster with a focus on employment and poverty alleviation. Hence the emphasis on policies and programmes intended to accelerate the growth in food-grains production, increase employment opportunities and raise productivity.

The provision of productive employment is designed to help people stand on their own feet and work with self-confidence and self-respect, as a first essential input to ensure their participation in developmental tasks.

The emphasis on rural employment through National Rural Employment Programme (NREP), Rural Landless Employment Guarantee Programme (RLEGP) and Integrated Rural Development Programme (IRDP) will continue with better planning, closer monitoring and higher organisation for effective implementation. Backward and forward linkages will be fully provided so that beneficiaries are able to make full use of the assistance. In addition, the growth in employment will be non-inflationary only if agricultural production, particularly food production, is augmented significantly.

The NDC, besides approving unanimously the draft approach paper, agreed that the Planning Commission should now proceed to prepare the draft Seventh Five Year Plan 1985-90 on the basis of the objectives, the programme thrusts and the targets of growth outlined.

Groups of experts will now go into some specific issues that were posed before the National Development Council and make their recommendations on them having regard to the following :

- (1) Whether the Seventh Plan should provide in its formal structure for the effects of inflation, both on resources and on costs of investments ;
- (2) Whether the Seventh Plan should provide for expenditure on maintenance of non-revenue earning assets as part of Plan outlays in order that such assets are properly maintained ;
- (3) Whether the concept of Special Area Development Programmes, which now cover hill areas and the tribal areas should be extended to other areas like desert areas, ravine areas, coastal areas affected by salinity, water-logged and flood-prone areas and areas which are of special interest and concern from the environmental angle ;

(4) The role and place of Centrally-sponsored schemes in the achievement of the objectives of the Seventh Plan ; and

(5) How flexibility can be built into Planning and the administration of anti-poverty programmes, where the States have a major role to play in their implementation, consistent with the basic objectives of such Plans being achieved. □

(Contd. from page 31)

tists, social scientists and social workers, but unfortunately very few have taken interest in the development process and planning of their area. Thus, the administrative machinery, the local government institutions and the leaders of the local society have not been as keen about the local horizontal planning or spatial planning as they ought to have been. They have to come together on the planning forum and combine their intellectual power and thinking faculties with their intimate knowledge of local area and community to formulate scientific development plans. □□

(Next issue : The project planning)

India to tap castor oil export potential

THE UNION MINISTRY OF COMMERCE has set up a working group to formulate a long-term strategy for the export of castor oil and to make an indepth study of all aspects concerning the development of castor oil products. It is expected to recommend an institutional framework which could be entrusted with the development of castor oil exports and, stable and remunerative prices for growers.

The group will estimate domestic and export demand, sector-wise and the viable level of prices for each sector. This will be with particular reference to the implications of technological and other changes in the pattern of demand in major foreign markets for longer-growth of castor oil exports from India.

In 1983-84, India boosted up castor oil exports to an all time high of 79,000 tonnes valued at Rs. 105 crores. The country hopes to increase these exports to a value of Rs. 125 crores in the current year. Most of the exports have been to the USSR, the West European countries and the USA. Castor seed are grown largely in Gujarat and Andhra Pradesh. □

BOOKS

A great parliamentarian

Builders of Modern India : Vithalbhai Patel By H. M. Patel, Publications Division, New Delhi, Pages 179. Rs. 15.

GUJARAT has given many illustrious sons to the nations among whom, Mahatma Gandhi is the foremost, and the Patel brothers—Vithalbhai and Vallabhbhai—are next only to him. Though the Sardar was more popular, the task of his elder brother in building modern India was no less important. Born in a peasant family, he rose from the position of a pleader to that of an eminent barrister-in-law. As a lawyer he was not confined to money-making but fought for public causes. After the loss of his wife at a young age, he gave up his lucrative practice and his family and private life and devoted himself to the service of the country literally till his last breath. He was elected to the Bombay Provincial legislature in 1912 and to the Central legislature in 1918; in between his terms in the Central body he also did exemplary service to Bombay as its Corporation President. As the first elected Indian Speaker of the Imperial Legislative Council he won many awards and shone like a lodestar among the intellectual giants who occupied the opposition and Treasury benches. His mastery of the legislative rules and various subject matters, debating skill, sharedness in putting questions and moving resolutions and non-official bills and boldness in protecting the powers and dignity of the House, while at the same time, maintaining decorum in words and behaviour, established him as a model legislator for all time to come. He even made the Viceroy and Commander-in-chief, bowed down to the legislature and waged the freedom struggle from inside. He was also a pioneering crusader for social reforms like intercaste marriage and for strengthening the local bodies.

Vithalbhai was a loyal congress soldier and a follower of Mahatma Gandhi. He held responsible positions in the Congress, organised the Bardoli Satyagraha, resigned his high office in the legislature on Congress orders, courted imprisonment which ruined his health and carried on effective propaganda in spite of serious illness, in foreign countries in the cause of India's freedom. In fact, he collapsed and died in Switzerland during his last tour.

Like some other leaders of his time, Vithalbhai had graduated from Constitutionism to mass action and, later to militant struggle. He was not an yes-man of Gandhiji and cautioned the latter on the eve of the Round Table Conference of the British intention to exploit the differences among the Indian representatives and advised him to forge unity and to avoid all other issues except the basic question of independence. In his analytical statement on the failure of the RTC he pointed out, "In spite of what Mahatmaji says, I venture to think that the Gandhiji

Irwin Pact was a blunder," and urged the Congress to immediately solve the communal problem. Towards the end of his life he issued a joint statement with Subhash Bose, calling for Gandhiji's resignation from the leadership and for waging a militant struggle on all fronts. This statement adversely affected his public image, and, unlike Netaji, he did not live longer to regain his popularity. It is for historians to assess, from the hindsight of later development like communal fratricide and partition, the views of Vithalbhai Patel.

During his brief public life of 21 years, Vithalbhai did so much service that the grateful nation will always cherish his memory. His great performance as a parliamentarian, in particular, continuous to be a beacon light to the legislators of free India even today and the MP's quarters are aptly named as Vithalbhai House.

The author, who is a veteran administrator and a political leader, has written the biography in such an objective manner that only his pen, and not his personality, is seen in the book. He also deserves praise for his painsaking efforts in the detailed presentation of Vithalbhai's legislative battles. Surely, this is one of the best books in the Builders' series.

P. SRINIVASAN

Statistics for planning development

Data Collection in Developing Countries by D. J. Casley and D.A. Lury, paperback Oxford University Press, Special Indian Price Rs. 45.

IN DEVELOPING countries data requirements for planning, execution of various programmes and their evaluation are enormous. The procedure for data collection, however, is a complex phenomenon. Although theoretical development in this field has been very rapid, the practical difficulties faced in the actual data collection have been on the increase with the increasing number of activities undertaken and their interaction. The felt need, therefore, was to develop concise but clear guidelines for practical users, both in the field of study design and data collection.

The preset work reviews briefly the sampling aspects and clearly differentiates as between the concepts, census, sample survey and case study. The discussion on survey design and the questionnaire are exhaustive and illuminating and replete with a large number of examples from several developing countries. It also deals with the composition of study team, development of appropriate questionnaire, data preparation and processing and the output format. The chapter on monitoring and evaluation ably defines the above terms and explains very clearly the various issues associated with them. The practical implications of various assumptions are brought out in a very neat manner, intelligible to the technical experts as well as to the generalist administrators of various programmes.

The book is good in its content, style and analytical rigour. It is a valuable contribution from the authors having practical experience in developing countries for those who are interested in the development of the third world.

D. TRIPATHY

Seed banks for oilseeds production

THE NATIONAL OILSEEDS and Vegetable Oils Development Board has decided to have regional seed banks to ensure adequate supply of quality seeds to the farmers. It will provide assistance to the seed producing agencies to enable them produce additional quantity of quality seeds of groundnut, soyabean and rapeseed-mustard which are at present in short supply.

To ensure easy and timely availability of inputs and credit besides proper marketing facility, the National Board wants that oilseeds growers' cooperatives should be organised at the grass-root level with an apex body at the State level to provide requisite input supply service and market support.

The Board has also decided to have a National Training and Extension Institute for Oilseeds to provide a linkage between research, extension and farmer. A laboratory will be set up for testing oilseeds, oils and oilcakes.

The Board will prepare area specific projects in consultation with the respective State Governments for increasing the production and productivity of oilseeds. The Board is of the view that in addition to soyabean and rapeseed mustard, special attention should be paid to the cultivation of mustard, safflower and red oil palm.

India's first industrial robot

AN INDIAN DESIGNED ROBOT has started working on the production line of the **Bharat Electronics Limited (BEL)**, a public sector undertaking.

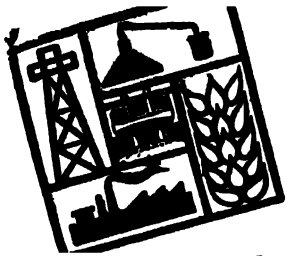
This is the first Indian robot to be engaged in industrial production. It has been set up in the BEL's second TV picture tube plant in Bangalore.

The plant itself is semi-automated. It has been conceived, designed and set up indigenously.

With the commissioning of this plant, BEL has attained the installed capacity to produce 3,00,000 picture tubes a year. One lakh tubes will be made in the semi-automated new plant.

The robot is a "pick and place" type, with three axis movements. It is pneumatically operated. Controlled by a micro-processor, it collects screen coated TV bulbs from continuously rotating screen coating equipment and unloads them on a twelve head drying machine. It is capable of correcting any cumulative errors of the coating equipments. A display board on the Control Panel indicates the exact area where the fault has occurred, thus facilitating instant correction.

The robot controls the release of the coated bulbs, and with its lower arms centres the neck of the TV bulb and puts it on the drying equipment. The Central Control unit of the robot has been designed in such a way that more functions can be assigned to it.



Pioneers of Indian
economic thinking

VOL. 28 NO. 17

Yojana

SEPTEMBER 16, 30 1984

Education for
the weak

NINE 1984

Rising population and
environmental
degradation

Drug Production in India

The production of drugs in the country has recorded substantial increase.

During 1983-84, the production of bulk drugs is estimated at Rs. 345 crores as against Rs. 325 crores in the previous year. In 1983-84, formulations worth nearly Rs. 1660 crores were produced, as against Rs. 1600 crores in 1982-83. The production figures are based on constant 1979-80 prices.

The value of production of bulk drugs increased by nearly 52 per cent from 1979-80 (base year of the current Plan) to 1982-84 and the formulations went up by 44 per cent.

The production of drugs and other matters concerning drug industry are constantly reviewed in the Ministry of Chemicals & Fertilizer.

Production of certain essential drugs like Methyl dopa (for blood pressure), Aminophylline (for asthma), Sodium Valproate (for epilepsy), Cisplatin (for cancer) and Vitamin B-6 have been undertaken in the country.

■ The country has acquired self-sufficiency in a number of essential drugs like sulphamethazole, Trimethoprim, Metranidazole, and Streptomycin. Most of the drugs covering a wide range of anti-biotics and Vitamins are now produced within the country. Efforts are being made to step up the production of Ampicillin and Chloroquin Phosphate as their production is not sufficient to meet the demand.

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Pioneers of Indian economic thinking

S. K. Ray

The evolution of modern Indian economic thinking owes its genesis to the economic content of the burgeoning movement of political emancipation in the Sub-continent during the nineteenth and early twentieth centuries. M.G. Ranade and his disciple R.C. Dutt were among the path-breakers in Indian economic philosophy, says the author.

THE INDIAN ECONOMY PROVIDES a panorama. In the entire complex of the developing countries of the world, the growth of the Indian economy is crucial to the development of the emerging South.

The evolution of Indian economic thinking, as a science formulated on the general principles of economics, owes its genesis to the economic content of the burgeoning movement of political emancipation in the Indian Sub-continent during the nineteenth and early twentieth centuries.

While this is largely true, it will be naive to consider it only as a focus of the struggle for freedom. The emergence of Indian economic thoughts did have established anchorages deep down in economic precepts and practices.

Relevance of economic laws

M. G. Ranade, the eminent Indian thinker and a path-breaker in Indian economic philosophy, felt that the laws of economics as interpreted by the Western economists were not comprehensively applicable in the Indian situation.

In view of the advancement in economic theory since Ranade's time, and also the fact that the applied

branches of economics do now cover the economic problems and strategies relevant to underdeveloped and developing countries as much as the developed, Ranade's opinion which has had a validity in his own time is no more applicable in today's context, at least in regard to the use of economic theory in the interpretation of India's economic problems.

Economics as a science no longer claims to have absolute canons of applicability under all circumstances. Economics, it has clearly been emphasised, no more makes a claim that the general economic principles can themselves always show what the right thing to do is in any given set of circumstances. In addition to this, it is also appreciated that an economy is dependent on diverse and heterogeneous factors and circumstances. Therefore it has since been appreciated by economists that it is impossible to provide conclusive formal proof of the absolute correctness of any particular decision.

What Keynes himself said in this context is also very relevant : Economic theory is now thought of as an equipment of general application for putting significant questions to particular bodies of facts, and a technique of thinking which helps its possessor to draw correct conclusions.

A specialised study of Indian economics can not however be divorced from the universal laws of economics. The latter are applicable in Indian conditions; only one ought to take care of choosing with care and precision the variables in economic phenomena that would be applicable in the Indian condition.

A broad profile

I shall first give a broad profile of the concepts on Indian economic development by the pioneers of Indian economic thinking. They represented what I may call the Indian school of economic emancipation

The writings in the nineteenth century India, in the framework of the political movement of the time, or ancillary to it, had a clearly discernible economic content, in the sense that the motivation was to serve the cause of the economic emancipation of a people in bondage.

The British government in the nineteenth century had brought to bear on their meandering economic policies an application of the unduly doctrinaire tenets of political economy, as formulated by them in the popular English books of classical economics.

The purely axiomatic and hypothetical character of the classical theories of political economy was conveniently overlooked. The presumptions as to the environments were also forgotten in deliberate economic-political manoeuvres.

Friedrich List in Germany came down heavily on such suit-the-purpose application of economic principles. It was particularly against the cosmopolitan principle in the economic system that he protested, and against the absolute doctrine of free trade, which was in harmony with that principle.

He gave prominence to the national idea in economic philosophy, and insisted on the special requirements of each country according to its circumstances and specially to the degree of its development.

List was not alone in pointing out the fallacy of presuming that classical economic laws were universal in their application. Apart from many important continental economic theorists, there were a few even imperialistic Great Britain, who were emphatically protesting against such a dogmatic and colonial application of the principles of economic law.

Criticism of the economic policies of the government during the greater part of the nineteenth century in India was vehement. The texture of such criticism did not, however, clearly bring out the economic fallacies in the enunciation and consideration of the principles of political economy. It was here that Ranade, followed by Romesh Chandra Dutt, stepped in.

Distinct postures

There are two distinct postures in the economic philosophy of Ranade, Dutt and the entire school of economic emancipation that they along with a few others represented. It will be worth the while to enunciate in clearcut terms a profile of this philosophy.

Because free trade was useful for England, the Government emphasised it must be good for India as well. Because the principles of *laissez faire* suited the conditions of the British economy, the Government imposed it on the colonial Indian economy.

The Government also had the gumption to postulate that it would be equally beneficial to India, intentionally glossing over the non-existence or only marginal existence of an infrastructure of private enterprise, already being annihilated systematically by the British as a integral part of their establishment of political suzerainty.

Ranade went about with remarkable aplomb to expose the incorrectness of these principles and the policies that the government formulated and practised under them. The challenge thrown in by Ranade was further taken up by his disciple R. C. Dutt, who took the matter to its logical conclusions, and proceeded to formulate an indictment on the state policies on economic exploitation in India. It was as the ultimate culmination of the Ranade-Dutt economic philosophy that Romesh Chandra finally issued his historic Open Letter.

Two main thrusts

Ranade and Dutt both took upon themselves the national responsibility of proving that :

Many of the assumptions at the back of all dogmatic treatment of the subject of political economy were inapplicable to India. Public policy, if it was really to further the economic development of the country, could not afford to ignore the peculiarities of the Indian context.

Hitting hard at the eccentric and colonial policies of the British Government leading to the systematic liquidation of the Indian industrial and economic aspirations to convert the sub-continent into an easy and open market for the British manufacturers, Ranade went eloquent in his writings and oratories.

R. C. Dutt developed the concept of economic exploitation further in his pioneering works of authority on Indian economic thoughts.

Incidentally, ever since the perspicacity of Ranade and Dutt, there have been sweeping changes in both political economy and Indian economic thinking.

As was said, political economy has, along with the Keynesian emergence, emphasised the hypothetical nature of some of its conclusions and has become chary of claiming universal validity for them.

Keynes has thus proclaimed in this context : The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus to the mind, a technique of thinking which helps its possessor to draw correct conclusions.

Economics of emancipation

To revert to the points at issue as relevant to the economic principles of emancipation in the Indian situation as enunciated by the pioneers of Indian economic thinking, I may summarise them in the subsequent paragraphs.

India in the nineteenth century was a great manufacturing as well as a large agricultural country, and the Indian handlooms supplied cloth and textiles to the markets of Asia and Europe.

The East India Company and the British Government, following the imperialistic commercial policies of a hundred years ago discouraged and even wrecked Indian manufacturers and even cottage and small

scale industries in the early years of the British rule in order to encourage the rising manufactures of England.

Their fixed policy pursued during the last decade of the eighteenth century and the first decade of the nineteenth was to make India subservient to the industries of Great Britain. It was also to make the Indian people grow raw produce only in order to supply material for the looms and manufactories of Great Britain. This policy was pursued with unwavering resolution and fatal success.

As the assumptions, (Ranade was referring to assumptions like enlightened individualism, completely free competition, mobility of labour and capital etc.), did not hold good of even the most advanced countries, it was obvious that, in economies such as the Indian, they were chiefly conspicuous by their absence of validity. The imprint of Friedrich List's precepts is abundantly clear and evident in this exposition.

Assumptory concepts

Dutt further enlightened how the adoption of the assumptory concepts of classical economics in the Indian situation of his time was incorrect and counter-productive.

- * There was neither the desire nor the aptitude for free and unlimited competition except within certain predetermined groups or grooves.
- * Neither capital nor labour was mobile nor entrepreneurship intelligent enough to shift from place to place.
- * These were fixed and not elastic or responsive to change of circumstances.
- * While population followed its own law, being cut down by disease and famine, production was static and stagnant. The bumper harvest of one year was needed to provide against the uncertainties of alternate bad seasons. Two consecutive bad crops often brought about a famine.

In a society so constituted, Dutt had seriously argued the tendencies assumed as axiomatic were not only not imperative, but were actually deflected from their proper direction.

The economic concepts of Ranade and Dutt do have a look of comparative exaggeration. If one goes through their stimulating works, one would naturally realise that there was really a played-up over-emphasis on the inapplicability of classical economic laws, and that this over-emphasis was rather deliberate.

The classical economic principles very much suited the pursuits of the British Government, from Dalhousie to Curzon, in the background of what came to be known as the notorious concept of imperial preference in India.

Dutt's theory, developed further on Ranade's econo-political philosophy, postulated that it was mainly the responsibility of the Government to sponsor and accelerate agronomic and industrial develop-

ment in the country. This concept was in fact diametrically opposite to what the Government practised. In an effort to emphasise their points, the political overtones in Dutt's philosophy, as also earlier in the oratory and writings of Ranade, are understandable.

In this context, it will be appropriate to chronicle and discuss some of the distorted and tendentious economic concepts pursued by the British Government in India.

To a student of Indian economic development, the concept of imperial preference fostered by the British rulers looms large as an inglorious concept where licences, priorities, economic assistance, shipping and transport, in short, all economic vehicles, were geared to this responsibility of the Government.

The country was thus being used for export of raw material to aid industrialisation of Britain, and also as a market for dumping finished products of the British industry.

As a result, while industrialisation could not take any meaningful step, agriculture was falling to pieces.

Even the tenancy laws and the settlement systems degenerated to produce a multitude of uneconomic holdings controlled by pockets of vested taluqdari interests. There was no effort towards modernisation of agriculture and betterment of cottage and small-scale industries. Medium and large scale industries were by and large discouraged except to serve British interests.

Based on Ranade's concept of the State's responsibility for developmental investment, Dutt later developed the theory of public surplus in India. He was consistently and repeatedly urging the government to set the pace for industrialisation in big cities and mineral belts, modernise the tenancy and settlement systems and rationalise the agricultural economy.

Open letter to Curzon

Dutt's Open Letter to Lord Curzon in my evolution served as a two-pronged charter of economic critique for appraisal of the policies of economic development pursued by the Government. It was a straight-forward indictment on the imperialistic economic designs of the Government and policies overwhelmingly oriented to such an objective. It was an incisive economic analysis of the British policy in India in disregard of the economic aspirations and well-being of the people. Finally it was a manifesto of economic policies which he continually urged the Government to pursue.

Another remarkable contribution of Ranade and Dutt to the debate on public issues of economic significance concerned the arrangement under which 'home charges' and 'imperial levies' were being repatriated to Britain 'in lieu of the so-called security and governance provided by the British in India'.

Dutt would not allow to go unchallenged such deceit in the formulation of public policy for economic development. "The advantages to India of the British

connection, such as they are, or vice versa, were not capable of being precisely measured". They were therefore out of place in a discussion occupied with concrete and calculable items, just as much as the incalculable though non-the-less real advantages which England derived from India, Dutt had urged.

His criticism was so vehement that it made Lord Curzon to sit up and join issues through a half-hearted exposition of his own. Curzon admitted that his data were not incontrovertible.

He also admitted that the picture of economic position revealed by his calculations was not in itself very brilliant or gratifying. But at the same time, Curzon pleaded, they showed that the movement of the economy was in a forward and not backward direction.

The first two Indian thinkers to see the necessity of emphasising many important causes of Indian poverty and economic stagnation were Ranade and Dutt, who were path-breakers in Indian economic thinking. Later writers on Indian economics did not always perhaps show their insight and erudition and their exquisite sense of proportion.

Streams of thought

A few specific streams of thought can be particularly spotlighted here, as these proved to be of considerable significance to economic development of not only contemporary India, but also in the twentieth century and after independence.

Such thoughts related principally to the prevalent adversities of the economic situation.

First was Ranade's views on the tenancy laws, further developed by Dutt. The development of sub-infeudation, owing to the margin between the fixed land revenue and the economic rent of land, and the growth of a long chain of middlemen, had virtually snapped the connection between the zamindars and the ryots, and defeated the intention of Cornwallis to establish a landlord and tenant system in Bengal on the British model, exclaimed Dutt.

The land was nobody's concern, he said, and the responsibility for agricultural welfare could not be fixed at any particular link in the chain between the zamindar and the actual cultivator.

The evil culminated, according to Dutt, in fragmentation of land holdings.

He, therefore vigorously protested against the lukewarm tenancy system pursued by the Government, and then formulated a bold scheme of ryotwari bandobast in his works, many ideas from which grudgingly borrowed in later years by the Government.

Dutt had a visionary's outlook also on foreign capital. He regarded the policy of raising capital abroad to finance national economic development as sound and well-conceived. In the formulation of his concept on 'borrowing abroad for development' Dutt appears to have been greatly influenced by Ranade.

Dutt's concept can be precisely summarised as follows : If no foreign control enters into the system, the main matters for consideration are :

- * "Can a new asset be created by means of an external loan which will yield a net annual return, directly or indirectly, to the people of India, exceeding the stipulated rate of interest ?

- * Can the money be borrowed abroad on the whole to greater advantage than in India ?

.....If both of these questions were answered in the affirmative, obviously the use of external capital was advantageous, Dutt said.

Even though in Dutt's own period these ideas were not infrequently criticised as an Open Invitation (a pun with his Open Letter) to foreign economic subservience, time has established the boldness as also the fundamental soundness of the farsighted ideas of Dutt and his mentor, Ranade.

All too often industry is wanted primarily for nationalistic reasons : to show that a country is modern, and that it need not depend on others for the goods it wants to be produced indigenously. Such thinking frequently leads to a number of unsound prestige projects in many developing countries.

This frequently tends to erect emotional and psychological barriers to the entry of foreign capital and know-how, even when it may be obvious, on purely economic grounds, that borrowed capital and technology have a necessary role to play, particularly in the first few phases of development.

These two factors had played an important but controversial role in Indian economic thought and in the formulation of economic policies in post-independence India. It was in this context that the historic Nehru Resolution on foreign investment was announced in the parliament of independent India.

And India has already lived through with enough participation of foreign capital and expertise in her industrial development during the first six Five Year Plan periods, so as to see the so-called 'nineteenth century concepts' of Ranade and Dutt fully vindicated even in the second half of the twentieth century and post-independence India.

Sound concepts

The soundness of the conceptual formulations of Ranade and R. C. Dutt should be judged against a few resultant considerations.

First, they did provide a very effective economic forum to the developing political movement of the country. Their cudgels were later taken up in the political manifestos of the Indian National Congress.

Secondly, even in those early days of political movement, their exposition of economic philosophy compelled the Government to come down to brass-tacks in matters of development and principles of government.

(Contd. on page 21)

Resource mobilisation through taxation

M. M. Ansari

A development oriented tax system requires a continuous modification in the existing tax structure so as to make it increasingly responsive to the changes in economic growth. The taxation policy is used, in almost every country, as one of the essential instruments for resource allocation, income redistribution and economic stabilisation, says the author.

AS THE PRINCIPAL OBJECTIVE of taxation is to augment adequate revenues for financing of capital formation and other public utility services, the increase in tax revenues in India, during the Plan periods, has recorded quite a significant growth. The ratio of tax revenue to the national income reached 18.5 per cent in 1980-81 as against 13.8 per cent, 10.2 per cent and 7.4 per cent in 1970-71, 1960-61, and 1950-51 respectively.

The contribution of tax revenue to the aggregate receipts (on account of both revenue and capital) rose from 45.5 per cent in 1960-61 to 56.2 per cent in 1970-71. In 1980-81, it reached 58.3 per cent. As a result of this growth, the share of tax revenue in the total revenue receipts has ranged between 77 per cent to 80 per cent during the last two decades. It is thus obvious that the revenues from tax sources have been of crucial importance for financing the development programmes of the country.

A need for review

While the above results present an impressive picture of the revenue fetching potentiality of the Indian

tax system and structure, the stationary state of tax ratio at around 18 to 19 per cent, especially after 1975-76 to-date, clearly suggest that the existing tax structure and its administration should be thoroughly examined so as to identify the reasons that have been affecting the revenue yielding capacity of the tax system.

This is all the more important, because (a) the country has been experiencing serious resource constraints in the recent times, more than in the past; (b) the prospect for improving revenue collection from non-tax sources is limited as the past experience shows; and (c) as the country's debt-service ratio is already rising, due largely to huge loans obtained recently from the IMF, any further increase in dependence on foreign resources might lead to a serious problem of financing debt services. An increasing trend in debt-service ratio would adversely affect the level of domestic investments, thereby impeding the overall growth of the economy.

Moreover, the present indications of a declining aid package and a somewhat stagnant nature of remittances from abroad, clearly suggest that the country has to rely more on domestic revenues especially from tax sources which constitute three-fourths of the total revenue receipt. In view of these considerations, the objective of this article is (i) to identify the potential tax bases which have been used less than the average extent; and (ii) to examine whether the prospects for improving the yield from certain tax sources exist.

Growth of tax revenue

An examination of the trend of growth of tax and non-tax revenues revealed that over a period of three decades (i.e. 1950-51 to 1980-81), the overall tax revenue has increased at the annual average rate of 12.0 per cent. The break-up of the growth rates over the different decades showed that the compound rate of increase in revenue was 15.0 per cent per annum

during 1970-80, as against 12.7 per cent and 8.5 per cent during 1960-70 and 1950-51, respectively. Table 1 exhibits the relevant growth rates. The increase in capital receipt, over the three decades, has been even more faster and higher (i.e. at the rate of 15.1 per cent per annum) compared with the rate of tax revenue (12 per cent).

Thus, as judged from the growth of the Gross National Product (at current prices) which grew at the rates of 4.3 per cent, 10.0 per cent and 10.1 per cent, respectively, during the three decades subsequent from 1950-51, the increase in revenues display quite an impressive record of resource mobilisation efforts. A further decomposition of the growth rates of revenues by its major sources, such as, tax and non-tax, indicated that the tax revenue has increased at a marginally higher rate than the non-tax revenues. Moreover, within the tax sources, it must be noted, the rate of growth of indirect tax revenues has been much above the rate for direct tax revenues, throughout the previous decades. A further disaggregation showed that the overall revenues of the states have risen at higher rates than the rates for the central revenues.

Important characteristics of tax performance. Firstly, the growth rates indicate nothing about the relative weights or the extent of contribution of an individual tax in the aggregate tax revenues. Secondly, these results neither give any idea about the nature of tax bases that have been exploited upto the desirable extent nor indicate the potential tax sources that can be utilized further for augmenting revenues without unduly burdening the tax payers. Since these aspects are imperative in tax analyses, we shall examine in the following paragraph the intensity of use of the different taxes and the relative contribution of each tax in the total revenue. The accepted technique of regression analysis has been employed for the purpose.

Utilisation of tax bases

The analysis of the results derived from the regression estimates of buoyancy and elasticity coefficients for the period 1960-61 to 1980-81 indicated that the buoyancy coefficients for almost all the taxes, except Agricultural Income tax, emerged to be more than unity; thereby indicating more than

TABLE 1

Annual Average Growth Rates of the Centre and States' Revenues and Gross National Product

	1950-51 to 1960-61	1960-61 to 1970-71	1970-71 to 1980-81	1950-51 to 1980-81
A. Tax Revenue	8.0	13.4	15.3	12.2
Centre	7.4	12.9	14.3	11.5
State	8.8	14.0	16.1	12.9
(i) Direct Taxes	5.7	9.6	13.1	9.4
Centre	4.7	9.6	15.6	9.9
State	7.1	9.5	9.6	8.7
(ii) Indirect Taxes	9.1	14.7	15.8	13.2
Centre	8.7	13.9	14.0	12.2
State	9.7	13.6	17.5	14.2
B. Non-Tax Revenue	9.2	11.4	13.8	11.5
Centre	10.9	14.1	14.0	13.0
State	9.5	11.0	11.7	10.7
C. Total Revenue (A + B)	8.5	12.7	15.0	12.0
Centre	8.6	12.8	14.1	11.8
State	10.7	12.6	15.9	13.1
D. Capital Receipt (Net)	23.3	4.6	18.1	15.1
Centre	28.8	3.0	19.7	16.7
State	14.2	6.8	16.9	12.6
E. Gross National Product (At current prices)	4.3	10.0	10.1	8.1

SOURCE:— Computed on basis of data in 'Indian Economic Statistics' Part II Public Finance, Ministry of Finance, Government of India, (Various Issues) and Economic Survey (1982-83).

While these results reveal that the tax revenue mobilisation efforts have been commendable as compared to rise in GNP, the growth rates hide some

proportionate increase in tax revenue with respect to the changes in incomes.

The concepts of elasticity and buoyancy may be defined as follows: While the elasticity of a tax measures the automatic response of revenue to the changes in incomes (i.e. revenue increase, excluding the effects of discretionary changes), the buoyancy of a tax measures the total response of tax revenue to changes in income (i.e. revenue increase, including the effects of discretionary changes).

The elasticity coefficients were however less than unity for all the Central taxes, whereas the same coefficients for most of the taxes under the jurisdiction of the state were above unity. In other words, the regression coefficients exhibited that the states' taxes were duly elastic with respect to income i.e. the increase in revenue associated with one per cent

TABLE 2
Comparison of Elasticity and Buoyancy, of the Centre and the States' Taxes and the Relative Weights of the Taxes

Tax	Buoyancy	Elasticity	Coefficient of discretionary measure (col.2-col.3)	Weight of the tax in the Gross revenue collection (Percentage)	
				in 1977-78	in 1980-81
1	2	3	4	5	6
Centre and States' Taxes (Combined)	1.24	0.89	0.35	100.0	100.0
A. Centre's Taxes					
(a) Centre's Taxes (All)	1.25	0.83	0.42	66.9	66.4
(i) Direct Tax	1.11	0.92	0.19	18.2	15.1
(ii) Indirect Tax	1.30	0.42	0.48	48.7	51.3
(b) Income Tax	1.18	0.89	0.29	7.2	7.6
(c) Corporation Tax	0.99	0.85	0.14	8.7	6.6
(d) Union Excise Duty	1.33	0.79	0.54	31.3	32.8
B. States' Taxes					
(a) States' Taxes (All)	1.24	0.97	0.27	33.1	33.6
(b) Agricultural Tax	0.43	0.19	0.24	0.7	0.6
(c) States Excise Duty	1.53	1.38	0.15	4.1	4.2
(d) Sales Tax	1.37	1.07	0.30	18.6	18.6
(e) Entertainment Tax	1.48	1.34	0.14	1.2	1.2
(f) Motor & Vehicle Tax	1.09	0.84	0.25	1.9	2.2
(g) Elasticity Duty	1.25	1.02	0.23	1.0	1.4
(h) Passenger and Goods Tax	1.54	1.30	0.24	1.5	2.1

*The elasticity and buoyancy coefficients were estimated for the period 1960-61 to 1980-81.

increase in income was estimated to be more than unity.

The automatic increase in Central taxes have been less than proportionate increase in national income, as the elasticity coefficients for all the Central taxes were less than one. It can, therefore, be deduced in general, that the tax system and the structure which is being administered by the states are somewhat more efficient, compared to that of the Central government. This conclusion conforms to our earlier observations, in Table 1, that the annual average growth rates of the states' tax revenues were generally higher than the Central revenues. This is despite the fact that the states have more fiscal constraints under the statutory provision than the Centre.

Further, as the buoyancy and elasticity coefficients for all the taxes of the country were 1.24 and 0.89 respectively the difference of 0.35 between these two coefficients indicated a moderate attempt to improve the performance of the overall tax system through the discretionary measures. Among the selected major taxes, a high discretionary change was indicated for the Union Excise Duty (0.54) under the jurisdiction of the Centre and the General Sales Tax (0.30) under the states (col. 3 Table 2). Incidentally, these two tax sources exercise a relatively heavy weight of 32.8 per cent and 18.6 per cent, respectively, in the aggregate tax revenues.

A further segregation of discretionary efforts showed that the Central taxes had a high coefficient of discretionary change (0.42) as compared to the

state taxes (0.27). This difference can however be ascribed largely to low elasticity (0.83) for the Central taxes compared to the state taxes (0.97). While the indirect taxes under the Centre emerged with a high coefficient of discretionary change (0.48) the same coefficient for the direct taxes was as low as 0.19. Further, income elasticity of direct taxes was also less than one (0.92). These evidences have a considerable bearing on policy formulation. We shall discuss this in the following section of this article.

Policy implication

As the coefficient of discretionary measure (0.48) for indirect taxes compared to the same coefficient for the direct taxes (0.19) was high these results suggest that a great deal of care must be exercised in making a choice between the relevant set of tax measures for resource mobilisation because indirect taxes might impose undue burden on the poor people owing mainly to a relatively high income elasticity to consume for them. It is primarily due to this reason that there is a convention among the tax experts that the indirect taxes, which are levied on the commodities, are generally regressive at the margin. The governments must be cautious therefore, in evolving rate structure of such taxes, lest the incidences are distributed inequitably, intentionally or unexpectedly, across the different income classes or the groups of consumer.

By the same token it can also be argued that less than unit income elasticity for the direct taxes to-

gether with a very low coefficient of discretionary measures would indicate that there have been no adequate attempt, for whatsoever reason in the past, to increase the yield from the direct taxes to the desirable level. This is evident from a lower rate of increase in direct tax revenues associated with the corresponding increase in income.

As the direct taxes are largely income linked and are collected from the class of people who are in a relatively high income bracket, the incidence of the tax may be expected to be equitous as the statutory rate structure are generally progressive. It cannot therefore be said that either economic efficiency or equity consideration might have suppressed the elasticity and buoyancy coefficients below unity. In view of the foregoing considerations, there is clearly a case for improving the compliance with the direct taxes on the grounds of both equity as well as economic efficiency**. Because (i) the relative neglect of revenue collections from the income-linked taxes has a direct bearing on the alleviation of inter-personal income inequality, which has steadily aggravated during the Plan periods; (ii) an intensive utilization of the direct taxes would provide a handsome amount of money which is urgently needed by the Public Sector for financing the development programmes; and (iii) the menace of growing parallel economy and its undesirable effects could be contained within the manageable limit.

Another conclusion which emerge from the foregoing evidences is that while the Centre's heavy reliance on the discretionary measures undoubtedly fetches more revenues, such measures, which are frequently taken either in the form of revision in tax rates or extension of coverage, may cause many uncertainties in the minds of taxpayers about the future tax liability. As a result, the business environment as well as the investment decision are accordingly affected. It, therefore, suggests that the different aspects of the tax problems must be thoroughly studied before any change in the existing tax policy is effected\$.

**Even though the econometric results indicate for the improvements in the compliance with the direct taxes, namely, Income Tax, Corporation Tax, Wealth and Property Tax and [Agricultural Income Tax, as it might be desirable on efficiency and equity grounds, such an improvement is however not likely to materialise to the appreciable extent. Because in a country where two third population is still illiterate, fifty per cent of the total population live below the poverty line and more importantly, where the economic and political power rests in the hands of a few lucky ones, it cannot be expected that the decision making body should take any such decision which would be against their own interest. It is for this reason, it may be pointed out, that in no other major federation like, United States, Canada, Germany and Australia such a steeper socio-economic inequality exist as in Indian Federation. This is despite the fact that India claims to be a 'Socialistic Republic' whereas other federations do not make such claims.

Limited scope

As already noted above, the tax ratio has already reached at the level of 18.5 to 19.0 per cent. Now considering the low level of per capita income of the country, the scope for mobilisation of resources through additional taxation might appear to be somewhat limited. However, the co-existence of unaccounted flow of black money in the Indian economy £ and less than desirable level of exploitation of certain revenue bases, as discussed above, suggest for improvements in the compliance with the tax through different measures, such as, streamlining of procedures, better tax administration including minimisation of corruption and prevention of evasions. The inadequacy of such measures is clearly indicated from less than unit elasticity of certain direct taxes, namely, Income tax, Corporation tax and Agricultural Income tax. All these taxes are categorised into the direct taxes and are linked with incomes. It is then not understandable why the governments should not collect revenues at least in the same proportion as the relevant tax base growths*. It may be mentioned in passing that there are considerable inflation induced losses from these taxes. We shall return to it later.

Though the income elasticity of Union Excise Duty was also less than unity, the coefficient of discretionary change (0.54) indicated a quite significant effort for raising revenues from the excise duties. Further, since the less than unit elasticity for the Union Excise duty is largely attributable to a heavy reliance on the specific nature of duties, rather than the collection of duties on *advalorem* basis, the revenue yield from this source could be raised provided that the share of *advalorem* based duties is increased from the presently estimated level of 45 per cent to a properly determined level that would not unduly burden the tax payers. This can obviously be done by bringing more commodities under the purview of *advalorem* basis of excise duties.

Inflationary conditions

Another dimension of the problem of tax revenue mobilisation may be described here. Of the various factors that affect the level of revenue collections, the persistence of inflationary conditions is impor-

\$Because, while the discretionary tax measures are taken every year for augmenting more resources, there is hardly any evidence for saying that such measures are initiated on the basis of systematic studies on the impact of taxation on the trade and business or its incidence on various socio-economic groups.

£Some of the studies by the individual researchers indicate that the extent of black money in the Indian economy vary roughly between 15 to 20 per cent of Gross Domestic Product. For a review of such studies see S. Acharya, "Unaccounted Economy in India : A Critical Review of Some Recent Estimates" *Economic Political Weekly* Vol. XVIII No. 49, 1985.

*The analysis of buoyancy coefficients with respect to the different proxy tax bases indicate considerable scope for collection of revenues from direct taxes.

tant one as the rise in prices push the nominal income up; thereby increasing the tax liability. Moreover, the cost structure of the different commodities is also adversely affected. As a result, the real value of exemptions, standard deductions and other tax incentives get reduced. From the point of view of raising finance, and more importantly, with a view to sustaining a reasonable level of investment in the economy, it is desirable that the tax system ought to response, at least, proportionately with respect to the growth in real income and rise in prices.

Though during the previous two decades the rate of change in prices has shown a great deal of fluctuation a discernible trend which has emerged is that the general price index has steadily been rising. During the period 1960-61 to 1970-71 and from 1970-71 to 1980-81 the index of prices has increased at the average rate of 6.5 per cent and 8.7 per cent per annum, respectively. This rise in prices have affected the revenue collections adversely especially from the direct taxes discussed in the preceding paragraph. The use of multiple regression analysis, which we examined elsewhere, indicated considerable inflation induced losses from the Income Tax, Corporation Tax and Agricultural Income Tax.

Agricultural Income Tax.

The Agricultural Income Tax, under the jurisdiction of the states, was found in our analysis to be less intensively used than warranted for as the coefficients of buoyancy and elasticity were estimated to be much less than unity i.e. 0.19, respectively. Moreover, the analysis of the relationship between the revenues from this source and the relevant proxy bases, namely, agricultural income and the level of agricultural production indicated a considerable scope for raising revenues from the Agricultural Income Tax. In other words, the rate of growth of revenue from this source was estimated to be much lower than the rate for the relevant bases such as agricultural income and agricultural production. As the revenue requirements of the states are duly high, this source ought to be adequately tapped.

While it is possible that big farmers, who are historically owners of large farms, might resent the proper level of imposition as well as collection of tax on agricultural income; and it might therefore have political repercussions in the short run, the states should be able to tackle the problem politically especially through the equitable distribution of the benefits of development.

As the larger beneficiaries of the economic services, financed through the proper level of taxation, would hopefully be those who live below the poverty line, the fear of political repercussion could be gainfully averted. This, however, requires a strong will not only to tax those who have the capacity to pay but also to ensure a reasonable degree of equity across the different socio-economic groups so as to create a just society.

Some suggestions

We may now recapitulate the foregoing discussion. We argued that the scope for additional taxation, in general, would be greatly limited in view of both a low level of country's per capita income and a reasonably high level of tax ratio of 18 to 19 per cent which has already been attained. However, the co-existence of huge flow of black money in the Indian economy and less than desirable level of utilization of certain revenue bases, especially the direct taxes, indicated that more finance could be raised through the improvements in the compliance with the tax demands.

To achieve this objective a set of suitable measures ought to be devised and properly executed. These measures should include rationalisation of tax structure, streamlining of procedures, improvements in tax administration including minimisation of corruption and prevention of evasions.

Moreover, as the inflationary conditions are likely to persist, as the country's experience over the last three decades shows, the tax measures must be implemented in the manner that neutralises the inflation induced budgetary gains or losses. It was noted that while the indirect taxes indicated a marginal inflation induced gains, the direct taxes exhibited considerable inflation induced losses. The neutralization of such gains or losses is imperative from the point of view of maintaining a reasonable size of the Plan investment in the country.

Further, for raising additional finance from domestic sources the revenue bases which are being tapped inefficiently have to be exploited properly to the extent possible. Because, the revenue generation from the non-tax sources cannot meet the shortfall in the required resources which is likely to occur as a result of a declining aid package and a somewhat stagnant nature of remittances from abroad. This therefore suggested that domestic resource mobilisation efforts ought to be stepped up with a greater vigour and in a more judicious manner than in the past so as to raise adequate funds for fresh investments. □

Assam's first micro hydel project

BORDIKHARU in Karbi Anglong District, Assam, is the first micro hydel project to become operative in the State.

With a capacity of 4×500 KW, the project consists mainly of a weir across River Bordikharu, called Dikhrupthi by the Karbis, (a local hill tribe). The lake formed by the weir is about 110 sq. km. in area. Electricity from Bordikharu Power House is brought to Dokmoka from where it is distributed to Dengaon and other places.

The project was started in 1978. It took 35,000 mandays of work to complete the project. It was commissioned at a cost of Rs. 275 lakhs. □

Education for the weak

Kusum K. Premi

To promote education among weaker sections on an even keel in the Seventh Plan, free elementary education for them and exclusive allocations for its qualitative implementation may be given priority. Besides, fixing a group priority among the weaker sections and adopting a disaggregated approach by taking district as the unit should be considered, says the author.

THE WEAKER SECTIONS have been an areas of special concern since independence. The Constitution of the country not only guarantees equality to all the groups in the country, but also provides for protective status to certain groups of people, specially scheduled castes, scheduled tribes and women.

Following the spirit of the constitution, the various Five Year Plans have initiated a number of policies and programmes for the different groups of weaker sections. All the six Five Year Plans have made special allocation for the development of the weaker sections. Starting with an allocation of Rs. 31.90 crores in the First Five Year Plan, the Sixth Five Year Plan allocated a total of Rs. 960.30 crores for the welfare of backward classes. A major share of allocation (Rs. 506.50 crores in the Sixth Plan) has gone to education.

Since Fourth Five Year Plan the programmes of equalisation received increased emphasis. The Fifth Plan initiated the scheme of special Sub-Plan for the scheduled tribes. The Sixth Five Year Plan paid special attention to various groups of weaker sections including women. The scheme of Special Component Plan for the scheduled castes was started in this plan. For promoting girls' education, special targets were set by the Sixth Plan. Efforts for universalisation of elementary education and expansion of adult educa-

tion were to be specially directed towards enrolling more women. Appointment of women teachers and hostels for women are some of the special strategies suggested by the Plan for promoting girls' education

Some of the important programmes for the weaker sections in education are : provision of schooling facilities within walking distance; free education at the elementary level; provision of ancillary services such as equipment, uniform and mid-day meals; stipends and scholarship at secondary level; post-Matric scholarships and reservation and relaxation in marks in high education in the case of scheduled castes and scheduled tribes; and institution of 4 scholarships per block for children living in the rural areas.

Accruing benefits

As a result of various special programmes there has been an improvement in the educational situation of the weaker sections, in particular, of scheduled castes and scheduled tribes and women. Thus the literacy rates for women improved from 7.9 per cent in 1951 to 24.8 per cent in 1981. In the case of scheduled castes also there was an increase in literacy rate from 11.3 per cent in 1961 to 14.7 per cent in 1971 and 21.4 per cent in 1981. Similarly the literacy rates of scheduled tribes improved from 8.3 per cent in 1961 to 11.3 per cent in 1971 and 16.4 per cent in 1981. In employment too, in terms of their percentage representation in class I and class II categories of jobs the situation of scheduled castes and scheduled tribes improved over the last 3 decades indicating vertical mobility.

In relative terms also there has been considerable improvement in the educational situation of the weaker sections. For example, the disparity index of male-female literacy which was .54 in 1951 came down to .33 in 1981. At the school level the coefficient of equality for scheduled castes improved from 75.5 in 1964-65 to 89.0 in 1978-79. At higher educational level the increase was more significant, from 37.4 in 1964-65 to 53.6 in 1978-79 in the case of general education and, from 29.3 in 1964-65 to 51.8 in the case of professional education.

However, the gap between scheduled castes and scheduled tribes and the others continued to be wide. Various research studies also indicate that the gap among different groups of weaker sections is widening. It is further noticed that improvement in educational situation of weaker sections is more in prestigious professional colleges, it is good in general arts and science colleges and is much less than their representation in higher education in general. Even quantitatively the picture is not as good as is given by official statistics as there is higher dropout and stagnation rate among the weaker sections compared to general population.

All this calls for a review of policies and programmes for the weaker sections; and initiation of new strategies in the VII Five Year Plan. This paper attempts to review various policies and programmes for the weaker sections in education with a view to identifying issues which need to be considered in the Plan. The paper makes use of various research findings to highlight a particular strategy.

The policy of protective discrimination in education, specially reservation for certain groups in educational institutions calls for an objective review of policies towards the weaker sections so that some better strategies could be evolved.

Too Late for Equalisation

A review of various programmes for weaker sections reveals that most of the meaningful programmes in education specially the programmes for the scheduled castes and scheduled tribes relate to higher education. At school level, although education is free it is not cost free to the poor. No doubt, some provision is made for the free supply of uniforms, books, equipment and midday meal, but the coverage continues to be low. Also, opportunity cost is very high in the case of weaker sections who are poor and whose children when they are 7 or 8 years old start working for mere subsistence. The result is that in spite of provision of facilities, the same are not available to really poor children of the weaker section. Further, a very large proportion of them drop out even before completing the primary education. But what is of greater concern is the that the dropout is not always of academically weak students but is of economically poor ones.

From the viewpoint of bringing children of weaker sections in school and retaining them in the system, it may be necessary not only to give free tuition but also to cover the actual private cost of education. For this more money need to be set apart in the VIIth Five Year Plan for providing various services free to cover all weaker children.

Indifferent administration

Further even when some incentives are provided there is no proper administration of the same. The result is that these are not always available in time. It is our contention that aid delayed is no aid. It defeats the very purpose of the aid. For ensuring

fuller benefit of the scheme, there should be a system of continuous monitoring of the schemes. The VIIth Five Year Plan should provide for some money for the purpose.

There is also need to evaluate the impact of various programmes, so that money could be diverted to programmes which yield better results. It is suggested that separate provisions in the budget should be made for evaluative studies.

The implementation of the schemes leaves much to be desired. It has been brought out time and again, that while many policies and programmes are good, they do not yield the desired results because of indifferent administration. From viewpoint of effective implementation of the programmes, training of administrators with a view to sensitising them to the problems of weaker sections has been considered necessary. Provision for such training in the VIIth Five Year Plan will go along way in deriving the maximum benefit from the money invested.

Quantity vs. Quality

It is note-worthy that most of the programmes for the weaker sections have, by and large, been aimed at quantitative expansion of their enrolment. Stipends, scholarships, provision of ancillary services, hostel facilities are all aimed at enrolling more and more children of weaker sections in the schools. Very little is done to see that children continue in the school system and their performance improves over the years. In fact, qualitatively the situation has not yet been diagnosed properly. The available statistics give only the enrolment of weaker sections, indicating thereby the governmental concern for quantity.

There are quite a few studies now which indicate poor performance of children from the weaker sections, specially those belonging to the scheduled castes and the scheduled tribes. Similarly some studies indicate that, in higher education a much larger proportions of students belonging to weaker sections, as compared to students belonging to higher socio-economic categories, are concentrated in arts courses and the less prestigious professional courses.

Of late, some money has been allotted for remedial teaching for the scheduled castes and scheduled tribes and some of the institutions have started remedial teaching classes also. However, very little is known as to the stage at which remedial teaching should start, what should be its content, who is to teach, and how it has to be carried out?

The effect of neglect of quality is now telling on the quantity itself which is clearly reflected in the high rate of dropouts. In the Seventh Plan, therefore, one needs to consider the programmes of qualitative improvement for which some resources need to be earmarked exclusively. One programme of raising the qualitative level of the weaker sections, which we suggested earlier, is to identify 1000 meritorious students from the deprived at the end of secondary level from different boards, give them good vocational guidance and

place them in good institutions according to their aptitude. Considering the cost of living a scholarship of Rs. 500 p.m. was suggested for the period until they complete the course. A continuous monitoring of their progress and, remedial teaching whenever found necessary was also suggested. Such schemes can be started by the states even by identifying meritorious students from the weaker sections at the end of class V or class VIII.

Fixing of priorities

Another issue which needs to be considered in the VIIth Plan regarding the education of weaker sections is the question of fixing of priorities among weaker sections themselves. In the Indian context the weaker sections comprise scheduled castes, scheduled tribes, women, people living in rural areas, and people living in backward and remote regions of the country. On these criteria about 90 per cent of India's population would fall in the category of weaker sections. Considering the availability of resources it may not be possible to have any meaningful programme which can cover all the above groups.

From the view point of policy it is necessary to understand the system of inequities in a realistic perspective. This can be done by building a pyramid of inequalities. We have attempted to build such a pyramid by taking literacy rates in 1971 as an indicator. From the pyramid it has been observed that females as a category are deprived compared to males. Among the males rural males are more deprived compared to urban males. Similarly, rural females are more deprived compared to urban females. More interesting is the fact that non-scheduled-urban females have higher literacy rate compared to rural males of all categories-total, scheduled castes and scheduled tribes, urban-males are better than non-scheduled females.

The implication for the policy are clear. Any blanket formulate of incentives either to the scheduled groups or to the females will not be fair from equity considerations. While such a policy may help to reduce disparities between the two groups, it may create more inequalities within group. There is now sufficient evidence that while scheduled castes and scheduled tribes and non-scheduled castes and non-scheduled tribes disparities in literacy and enrolments have reduced over the last three decades as a result of policy of protective discrimination, within group inequalities among scheduled castes and scheduled tribes have increased not only along caste lines but between males and females as well.

For overall reduction of inequalities it is, therefore, necessary to give special attention to sub-groups within broad groups of weaker section. Basing on the literacy figures for various groups of the deprived, it may be necessary to concentrate on rural females of all the categories, i.e. scheduled castes, rural females, scheduled tribes rural females, non-scheduled rural females. A second-priority need to be given to scheduled castes and scheduled tribes rural males and scheduled castes and scheduled tribes urban females. Non-scheduled urban males is the only category which may not need any special attention.

In addition to identifying weaker groups needing priority in the VIIth Five Year Plan, it will also be useful to identify the districts which need special attention during the Plan period. So far the policies, that have been formulated to help the weaker sections, have taken State as a unit. But now there is considerable evidence which points out that within state inter-district differences are greater compared to inter-State differences. The research evidence also indicates that there is a high degree of temporal stability in respect to educational development as indicated by literacy rates.

For identifying backward districts from viewpoint of education of weaker sections one can use a variety of indicators. We at National Institute of Educational Planning and Administration (NIEPA), have identified backward districts from viewpoint of women's education on the basis of number of indicators. These districts may be taken up for priority attention in the VIIth Five Year Plan. Similarly exercise may also be attempted to identify backward districts from the viewpoint of education of scheduled castes and scheduled tribes, such districts should get priority in the VII Plan. It is hoped by so doing one will be in a position to use the available resources for the education of the weakest in a more meaningful way rather than disbursing them too thinly over all the weaker groups and all the disadvantaged areas.

Conclusion

This paper reviews some of the policies in education for the weaker sections. In so doing an attempt has been made to identify the areas of priority and suggest some of the new strategies of the VIIth Five Year Plan should aim at (i) giving higher priority to elementary education of weaker sections, including additional funds for making elementary education cost free for the weaker section; (ii) special allocations for monitoring of various schemes with a view to ensuring timely and effective implementation of various schemes; (iii) provision for evaluation of the various special schemes in order to identify schemes which yield maximum benefits; (iv) exclusive allocations for the programmes of qualitative improvement and for conduct of researches in the area of education of weaker sections; (v) fixing of group priority among the weaker sections, and (vi) adopting a disaggregated approach by taking district as the unit and giving priority to the most backward districts

There may be several other issues from the viewpoint of promoting the education of weaker sections and it will be useful to keep them in mind while formulating the VIIth Five Year Plan. □

**A tree for
every child**

TOWARDS SOCIAL REVOLUTION

a Case for Economic Democracy -

VASANT SATHE

A Serialisation

6

The Political System

Sustenance of democracy

AN IMPORTANT FACTOR FOR SUSTAINING DEMOCRACY is the existence of at least two strong parties at the national level which could provide a meaningful choice to the people. Party organisations have also to be democratic in their structure if their rank and file as well as their leadership are expected to imbibe faith in democracy. If there is no functional democracy within the party framework, the persons who may use that party to gain the confidence of the people and acquire political power would also do so without having any inherent faith in democracy itself.

Hence, the same principle of representative character, according to which representatives are chosen in a free and fair election, must also apply to the internal working of every political party. A political party being a better organised entity, where there is a day-to-day interaction between the leaders and the members, needs to have a better organisational pattern. The membership of a political party must also be clearly identifiable and definable as consisting of those who willingly accept the aims and objects as well as the policies and programmes of that party. Some time back, I had, in a letter to the Congress President, made a proposal for restructuring the Congress Party right from primary membership onwards, suggesting that in today's money value, the membership fee should be Rs. 5 and the member should be provided by the party with an identity card carrying his photograph and full address. The suggestions made in that proposal are applicable to every other political party and I am therefore reproducing extracts from the said letter:

Any elections held on the basis of existing membership, which is largely bogus, will not be in the best interests of the party. Any person who is supposed to have enrolled 25 primary members is considered an active member and normally this active member pays Rs. 25 from his own pocket in the name of 25 different persons and that becomes the basis of ordinary members'

list. Obviously, an organisational super-structure based on this type of "active members" and "ordinary members" list will erode the very foundations of our organisation. I would therefore suggest the following measures:

1. We should have a fresh membership enrolment on the basis of every member paying Rs. 5 per annum as membership fee. This member should be given a membership identity card with his photograph. These cards can easily be preserved when given in a plastic cover. Duplicates of these cards can be preserved both at the state level as well as the central office.
2. Membership fee thus received can be distributed in the following manner :
Rs. 2—towards printing of the card;
Rs. 1—with the central office funds;
Rs. 1—each—with the state and district offices.
3. There should be no artificial division as "ordinary" member and "active member", because each member is supposed to be active. Those who show greater interest in the party work would naturally get better opportunities.
4. Organisational structure from block level upwards should be on the basis of elections by these members. Election machinery with independent outside sympathisers could be formed and entrusted with holding impartial and fair elections, somewhat on the lines of Election Commission.

Party funds and financial structure

It has been our experience that although the Congress had been in power throughout the country during the three decades, we have not been able to put our organisations at various levels, down to the district or taluka, on a sound financial footing; where-

as individuals have benefited and institutions have come up, but they are not connected with the party and the party units do not derive any regular financial income from them.

One of the main sources of regular income in most of the urban areas and district centres is from the rental of buildings. Many individuals and businessmen, through their influence, have been able to acquire good plots in major commercial centres of cities and towns and have constructed huge buildings and commercial complexes with the help of public financing institutions such as banks, LIC (Life Insurance Corporation), etc., and are getting substantial rental benefit. If we could have thought of allowing district party offices or even state party offices to get some important plots and construct on them such buildings which could be rented out to banks, etc., on a commercial basis, today our district and state level office could be legitimately earning substantial financial revenue to maintain their staff and administration and whole-time workers. Any political party could do this without inviting criticism.

There must be a genuine, continuous and legitimate source of income to district and state officers which will enable them to pay a decent enough salary to their office-bearers. If a whole-time president and general secretary at the district or state level are paid a salary equivalent to that of an MLA or MP, that may prevent each and every one seeking legislative offices.

Avenues of promotion for party workers

(1) A time has come when we should be able to select and promote right people for right fields. To do this we should be able to identify members according to their likes, aptitudes, tastes and qualifications and then to promote them in these areas

(2) One way of providing avenues (of promotion) to the party cadre is to put them as members on the managing boards of various institutions which get finance from the public financing institutions. We should be able to take a policy decision that every institution, whether public or private which takes more than 60 per cent of its funds from public financial institutions, must appoint at least three members as directors on its managing board, to be nominated by the said financing institutions. One of these directors should be from the financial field or the institution and one each nominated by the State and Central Governments. These members should be active and qualified workers from the ruling party. These members would be paid regular monthly remuneration. They will not only get experience in the working of these various industrial and commercial units but will also be able to oversee that the objectives of the ruling party, as representing the people, are properly implemented.

(3) It is time that we reorganised even our legislative functioning by dividing legislators into various statutory committees according to important sub-

jects. All legislations, after their introduction, should go to these committees for clause-by-clause consideration and should come back to the legislature only for the final reading and passing. This will not only save much of the time in legislatures but will also be able to achieve more positive contribution by the members. One of the reasons why members do not take interest in legislative work either in parliament or in assemblies is because they hardly get a few minutes to make any contribution on a particular Bill. Once legislative work becomes a serious affair to be done in a committee chamber, political parties will also think in terms of selecting and sending qualified and knowledgeable persons to legislatures

(4) Apart from other institutional and legislative avenues as described above, the party can be divided into more modern cells, such as "science and technology cell", "media cell", "environment cell", etc., in which more systematic studies should be made by party members in collaboration with independent experts of various subjects as associate sympathisers and there should be a close liaison between those cells and members of legislature of the party. It is very necessary to revive the practice of "study circles" where serious studies are made on various socio-economic and other subjects. Like the government in a welfare state, a political party is now concerned with practically every field and aspect of the society's life and there should be ample scope for serious and in-depth study and consideration in these various areas. There is too much of superficiality and exuberance in the activities of our party members at various levels. It is more in the form of a continuous election campaign and there seems to be hardly any time for party members to apply their mind to the study of any particular field or even problems.

I have often believed that we must discourage party workers from doing what is called "free service" in the name of selfless sacrifice for a cause. This has a highly demoralising and corrupting effect, particularly when they see that those who ask them to give such service are themselves economically quite well off and have acquired good positions. An effort must, therefore, be made to see that everyone who gives his whole time for that party is provided with a legitimate and regular source of income.

Another aspect which needs to be considered very seriously is the necessity of a national authority which should be elected directly by all the citizens of the country. Such an authority is necessary to maintain the unity and integrity of the country as a nation. This, in turn, will automatically impel the growth of more than one national party operating at the national level. A suggestion could be considered as to whether the chief executives of the country, such as the president, the vice-president and prime minister could not be elected directly by the people of the whole country. They should be answerable to the Parliament, in matters of policy, but they shall not be liable to be removed by the Parliament except by way of impeachment requiring a two-third majority of those present and voting which must also be an

absolute majority of both the Houses of Parliament. The powers of the president, the vice-president and the prime minister can be clearly defined and can be made complementary without any conflicting areas. For example, the president can be made responsible for all executive and administrative actions to implement the mandate given by the people who elected him and also administer the country according to the laws made by the Parliament from time to time. The vice-president, who would assist the president, could also be given specific departments. The prime minister would be mainly responsible to Parliament and would attend Parliament and be answerable to it for the general actions of the government. All this can be done just by amending Article 52 to 56 of the Constitution and by other incidental changes so as to provide for direct election of the president by the entire electorate of India.

As stated earlier, Parliament itself would be divided into statutory committees according to major heads of administration where members in smaller groups would be able to study the legislative measures more closely and would also be able to keep a closer vigilance on the administration of various departments. The general open session of Parliament would then be required to meet hardly for a period of two to three months, when there would be greater scope for members to express their views on general issues and policies to be debated at greater length and detail.

This, in turn, would also encourage the political parties to select members to the legislature with greater knowledge and experience in various fields to which they would be required to make a contribution. As the political cadre would have much greater avenues of remunerative occupations, such as the paid membership of the board of management of practically every type of organisation which takes a major part of its finance from public financing institutions, there would be no paucity of avenues for the active party cadre and it would not be necessary for every person to seek membership only in a legislature, without having the requisite qualities or aptitude. The question of misfits with ulterior objectives comes in when there is lack of opportunities otherwise. This happens practically in every field.

If there are no adequate employment opportunities, then, people try to get employed and get admittedly for considerations other than merit even to specialised fields such as medical sciences and engineering as well as to administrative posts. It is obvious that this can be highly dangerous and can retard progress. One cannot think of making a man a pilot of a passenger jet plane for any other consideration except strictly his capacity to fly the plane. The same is true of all public offices, where the lives of the people, in one form or the other, depend on the quality and capability of the persons entrusted with the responsibilities. But today, because the damage done by people in public elective offices not having adequate qualities or capabilities for the job is not

immediately visible and because, fortunately, there is still an administrative machinery to actually implement their decisions, nobody seems to bother about the need for electing capable people as their representatives to the various legislative chambers. But opportunities of employment would grow and as legislative chambers become more effective with functional committees, requiring a more serious and in-depth contribution by the members, the character of representation would automatically change. This, in turn, would increase the respect for the elected representatives not only in the administration but also among the common people. If the credibility of democracy is to be maintained and enhanced, this improvement in the quality and functioning of legislatures has to be brought about.

There is an urgent need for considering the matter of reorganising the parliamentary system and also for creating a nationally elected authority with the mandate and sanction of the entire nation. Fissiparous tendencies having strictly regional, parochial and chauvinistic appeals are raising their heads, threatening and endangering the very unity and integrity of India as a nation.

We have seen from experience in this very sub-continent that it does not take long for a nation to disintegrate if parochial and linguistic considerations overpower and dominate the feelings of a united nation. It is, therefore, a matter of serious urgency for all intellectuals and thinking people in our country to start a debate for considering ways and means and steps required to be taken to prevent any such unfortunate development.

Even today, the opposition leadership has not realised the need for subverting their personal or group interests in order to create a national alternative to the Congress. As a result, narrow emotional appeals at the regional, linguistic and parochial levels have become stronger. There is the obvious tendency for the growth of regional parties. Everyone realises that this is a dangerous trend because it will only encourage fissiparous and divisive forces. But because realism and pragmatism have come to mean personal aggrandisement, we do not see a cohesive effort in the political leadership to rise above narrow selfish considerations for the greater cause of the survival of the nation as a united and strong democracy. This is an imperative and basic need, and sometimes one feels that the younger generation of the intelligentsia should take up the challenge and, if necessary, ask the politically stagnant leadership to retire from the field and build a cohesive national dynamic force believing in democracy and in the welfare of the entire people of a united and strong India.

The concept of regional autonomy should be acceptable only as a factor that encourages economic and social growth in a balanced manner, and it should never take the artificial form of being restricted on the lines of religion, caste, creed or language. If, for the purpose of bringing about growth in an

efficient manner, administrative decentralisation becomes more useful, such units can always be formed and given greater powers but without in any way interfering with the unity and integrity of the Indian nation as a whole. These are matters which can always be resolved by a rational dialogue. In fact, such a remedy was already visualised when Article 371 was incorporated in the Constitution.

Unfortunately, the biggest malady on our national scene is the absence of the necessary dialogue among the thinking people at all levels. There is indulgence in superficiality and an attempt to attack the symptoms rather than the disease. This is easily apparent even if one takes a look at the general topics in the newspapers—even the national newspapers of the country. Unless there is a strong urge in the thinking people and in the political leadership to sit together with an open mind without prejudice and a willingness to subserve personal and narrow group interests, it will not be possible to maintain a healthy parliamentary democratic system at the national level. The danger of parochial forces raising their head and threatening disintegration will continue to loom large.

Sometimes, one feels that only if the national Press—which has shown that it can influence trends when it asserts itself collectively, for instance, in the matter of the Bihar Press Bill—decides to emphasise the need for a national democratic party, can a campaign be launched to bring together all politically inclined forces and to persuade them to form a national alternative. If the Press and the young people of the country were to take up this issue seriously, the task should not prove difficult and it would be the greatest service to democracy if a national disciplined political alternative were to emerge at this critical juncture. But here also the supreme test of *Adveshta Sarva Bhutanam Maitrah Kârûna evach, Nirmamo Nirahan Karo Sakh Dukh Samakshmi* will have to be strictly applied by all concerned. (Hatred towards none, friendship and compassion to all, without selfishness or ego and with equanimity in pleasure and sorrow).

In this context, it would be relevant to briefly consider the concept of non-violence as preached and practised by Mahatma Gandhi.

India has always been proudly proclaiming the inheritance of great and enlightened preachers and teachers like Buddha, Nanak and recently Mahatma Gandhi and Vinoba Bhave. We are constantly projecting the life of Gandhi, emphasising the insistence on the creed of non-violence even in struggles against oppression. Recently, Attenborough's film on Gandhi and his message of non-violence has received tremendous popular response throughout the world. Consequently, people outside India are bound to be curious about the extent to which Gandhiji's teachings are being practised in his own country. Fortunately, there is no divergence of opinion even among the opposition parties in paying respect to the philosophy of Gandhiji, in particular, relating to non-violence.

May I suggest that, as a basic norm, all political parties and social and religious organisations should take a solemn pledge not to resort to violence for any internal struggle? I have been an active trade unionist for more than 35 years and have led trade union movements for many years; leading protest marches and morchas was, in fact, a regular activity of mine. It is my belief, based on experience, that if the leadership is clear in its mind, violence can be totally avoided. In all my trade union activities, I persuaded all other trade union activists to ensure that we did not allow even a modicum of violence in our trade union movement.

The police then have the responsibility to ensure that as long as demonstrations remain peaceful and do not create a law and order problem, such as obstructing traffic or normal life, they do not resort to the use of force against the people. Individual crimes can always be taken care of by the law and order machinery and one simply cannot conceive of any right by which a person or a group of persons can possess lethal weapons, that too in the name of religion. This issue needs to be seriously discussed and serious questions asked. The carrying of arms may have been necessary at a particular period in history, but to continue it as a part of religion even in this age is the height of absurdity and irrationality. Unfortunately, people are afraid even to discuss such matters. It is this blind irrational fanaticism which is leading to the revival of fundamentalist movements in the name of religion. As has been said earlier, every religion and its founder have essentially preached peace, love and amity among human beings. Hence, if every political party and social and religious organisation in the country makes a sincere pledge to adhere strictly to non-violent methods in resolving their problems, I think India can at least set an example by trying to live up to the philosophy of non-violence preached by the Father of the Nation.

A look back at one of the main objectives which the early planners, and particularly Pt. Jawaharlal Nehru, had set for themselves, namely, that of ushering in socialist democracy is also called for. We have talked so much about socialism and we even enshrined the word 'socialist' in the preamble of our Constitution along with the basic objectives of democracy and secularism. But now that word is becoming an anathema to some and very few approve of it. The reason is that the moment we discuss socialism, there is a tendency to get involved in doctrinaire clichés and conjure up visions of economic authoritarianism which goes against the essential tenets of democracy and individual freedom.

The truth, however, is that socialism aims at ensuring and promoting maximum freedom to individuals to engage in economic, social and political activity, conducive not only to their own growth but also to that of the entire human society. The primary consideration here is that every action of an individual must be in harmony with, and conducive to, the well being, health and growth of the entire human race. The most suitable analogy is that of a

human body. The size and the role of one part differ from those of another but yet, every part, nay, every cell, has its own importance. The role of the brain (like that of a government) is to provide the necessary stimulus and direction to all parts to function in a healthy, harmonious manner. We must think unless the lungs and heart constantly supply it with fresh blood.

Therefore, what we should have is an economic democracy which should be truly participatory at every level so that there is a constant link, coordination and interaction between all sections and any mistake or distortion is corrected immediately. At the parliamentary level, this is to be achieved by active statutory parliamentary committees of manageable sizes to which the ministries and the administration would be answerable and which would exercise constant vigilance.

Jawaharlal Nehru was convinced that the real solution to India's economic problems lay in socialism. He wanted it to be adopted within the political framework of democracy so that the advantages of individual freedom could be retained along with socio-economic justice to be achieved through socialism. He had stated in his presidential address to the Indian National Congress as far back as 1936 that :

"I am convinced that the only key to the solution of the world's problems and of India's problems lies in socialism.

"I see no way of ending the poverty, the vast unemployment, the degradation and the subjection of India's people except through socialism. That involves vast and revolutionary changes in our political and economic structure, the ending of vast interest in land and industry as well as the feudal and autocratic Indian States system. That means the ending of private property, except in a restricted sense, and the replacement of the present profit system by a higher ideal of cooperative service." In his autobiography published in 1936, elaborating his thoughts on socialism, Jawaharlal Nehru has stated :

"Socialism involves a certain psychological outlook on life and its problems. It is more than mere logic. Inevitably we are led to the only possible solution—the establishment of a socialist order, first within national boundaries, and eventually in the world as a whole, with a controlled production and distribution of wealth for the public good.

If political or social institutions stand in the way of such a change, they have to be removed.

To compromise with them at the cost of that desirable and practical ideal would be a gross betrayal.

It is obvious that the vast changes that socialism envisages cannot be brought about by the sudden passing of a few laws. But the basic laws and power are necessary to give the direction of advance and to lay the foundation of the structure.

If the great building up of a socialised society is to proceed, it cannot be left to chance nor can it be done in fits and starts with intervals of destruction of what has been built.

The emotional appeal of socialism is not enough. It must be supplemented by an intellectual and reasoned appeal based on facts and arguments and detailed criticism.

If socialism is to be built up in India, it will have to grow out of Indian conditions, and the closest study of these conditions is essential."

Talking about socialism in the context of individual freedom and democracy, Nehru had expressed his view as follows :

"Real world order and peace will only come when socialism is realised on a world scale

I think it is possible in theory to establish socialism by democratic means, provided of course the full democratic process is available. In practice, however, there are likely to be very great difficulties, because the opponents of socialism will reject the democratic method when they see their power threatened . . .

I do not see why under socialism there should not be a great deal of freedom for the individual; indeed far greater freedom than the present system gives; he can have freedom of conscience and mind, freedom of enterprise, and even the possession of private property on a restricted scale. Above all, he will have the freedom which comes from economic security, which only a small number possesses today.

I think India and the world will have to march in the direction of socialism unless catastrophe brings ruin to the world. That march may vary in different countries and the intermediate steps might not be the same."

Addressing the Conference of All-India Manufacturers' Organisation in New Delhi on 14th April, 1956, Jawaharlal Nehru set at rest all distinctions between socialism and the socialistic pattern:

"A socialistic pattern is socialism. Some people seem to make fine distinctions among socialistic pattern, socialist pattern and socialism. They are all exactly the same thing without the slightest difference".

About political democracy in the context of economic progress, in a letter to an English-

man, written as early as January 1936, Nehru has stated :

"Political democracy is the only way to the goal and is not the final objective. The real demand for it comes from a desire sometimes unconscious, for economic changes. If these changes do not follow soon enough, the political structure is likely to be unstable. I am inclined to think that in India, circumstances as she is today, the need for economic changes is urgent and a vital political change will inevitably be accompanied or followed by substantial economic changes".

As stated earlier, it is high time that politicians, intellectuals and the youth rose above narrow personal considerations and got together for the larger cause not only of saving democracy but also of putting it to the service of the people.

Very often, in the name of pragmatism and realism, persons, particularly those who have been in the power game, seem to feel that all appeal to higher values or ideals is impracticable and unrealistic and is meant only for public consumption and for paying lip sympathy, but, in actual life, the other considerations of practical power politics, where the theory of the survival of the fittest alone operates, are more valid. These people know that in practical politics funds are required for elections; for holding party conferences and conventions; and for other activities and that these funds come mainly from those who possess large quantities of unaccounted money and have benefited by the decisions of the people in authority. We often talk so superficially about corruption without realising that corruption, like pollution or blood-poisoning, has become a part of the whole system and unless some serious measures are taken to eradicate this malady from its very roots, a piecemeal solution or attacking the symptoms will never solve the problem. As to the source of this corruption and how it has become all-pervasive. I shall deal with those issues in subsequent chapters. But ultimately, the political structure, the socio-economic structure and the philosophical approach all go together, one influencing the other. Unless we have a total view of things and a holistic approach to life, it will not be easy to find solutions to our problems. (Next issue : The Economic system)

(Continued from page 9)

- Such economic measures as led to the industrialisation of the country in phases, and also towards revision of the ryotwari settlement and modernisation of agricultural methods, were increasingly adopted.

The measures taken might have been only marginal, and sometimes even peripheral, but they did cor-

rectly set the pace of things to come in the next few decades.

The renaissance

Nineteenth century was one of renaissance in India. In the background of a movement, first for self-determination and, then for political freedom, it witnessed an efflorescence of learning, erudition, oratory and leadership in the country, which overlapped into the early twentieth. The century threw up an array of leaders and men of letters of such excellence the like of which India has seldom witnessed.

The best of national thinking, however, blossomed in the context of the struggle for self-determination and independence. The entire panorama of their writings and oratory had naturally, therefore, a political format, in that it was to serve the ends of a freedom-movement, a movement of emancipation of a people in bondage. The trends of the renaissance continued in the early twentieth century with a renewed emphasis and more prolific political overtones. As I said, there was, however, a clearly discernible economic content.

I shall now endeavour to give a profile in one place of economic content and corpus of the Indian renaissance in the nineteenth and early twentieth centuries in as brief a format as possible.

Quite early in the nineteenth century, as I said, Ranade, Nauroji and Ramesh Chandra Dutt focused attention on the policies of economic deprivation and exploitation pursued by the British Government, through the vehicles of 'the imperial preference' and 'the drain'.

They took up cudgels against such policies, and formulated the theories of surplus and state-responsibilities, and were talking of implementation of such concepts as plough-back and economic rehabilitation.

Followed in their trail the quick-silver writings and oratory of Tilak, Annie Besant and Gokhale, who took upon themselves the national responsibility of exposing the hollowness of the economic policies and administration of an alien government, geared to the absolute requirements of a colonial rule.

These great men, followed by Rabindra Nath Tagore, Chitta Ranjan Das and Mahatma Gandhi, were constantly formulating principles and policies of economic rejuvenation and socio-economic equities.

They developed the economic outlines of *swarajya* (self-governance), launched the *swadeshi* (indigenous production) movement, and formulated principles of economic planning in the national debate of economic programmes.

In independent India, Jawaharlal Nehru set up the amphitheatre of economic planning for accelerated economic development of India in the shape of the Planning Commission.

The effectiveness of the range of economic philosophy adumbrated by these thinkers has been traced in the theory and practice of economic development in India, in order to determine their vision and perspicacity, in the context of today's economic situation, right up to the historic Nehru Resolution. □

Increasing food production

G. A. Kulkarni & Shambhu Dayal

The authors here discuss the likely increase in food production on account of various measures such as use of irrigation, adoption of high yielding varieties of seeds and application of fertilizers. Limitations of these measures have been pointed out along with the remedial suggestions.

INDIAN AGRICULTURE IS FACED with contradictions. The drought invaded about three-fourths of the country during 1982-83 and emergency measures were launched by Government to salvage as much crop as was possible. However, as a result of sustained campaign which ensured supply of essential inputs such as fertilizers, improved seeds and irrigation, we succeeded in achieving a good rabi harvest. During 1983-84, we have achieved a record food-production of 149 million tonnes mainly because of the good rains. These situations, however, demonstrate that our agriculture is, by and large, still at the mercy of nature. Further, during unfavourable times, concerted efforts do bring about some good results. The long-term strategy for agricultural development has, therefore, to break this constraint of nature in a big way but in the immediate future we have to operate within this constraint and maximise the production through measures at our disposal.

We know that in spite of our best efforts, only about one-third of the area under crops has been brought under irrigation. There is an imperative necessity to bring further area under irrigation. However, investments and efforts on the irrigation front have to be on a very large scale. As short-term measures, we have to provide fertilizers and high yielding varieties of seeds etc. to the areas under crops. These measures may not require very huge investments.

An effort here has been made to estimate as to how much increase in food production is possible if no further investments on irrigation are made. Further, if we are investing in a big way on irrigation projects, it is to be seen how much increase in the production can be expected. The projections have been made on the basis of yield rates already achieved in the field and not on the basis of yields achieved in controlled experiments. The projections, therefore, present a realistic picture, of course, with the assumption that the technology applied in the experiments would not be adopted in the field extensively in the immediate future and also that much scope is not left for bringing additional area under crops.

Increments in food production

All India area yield rate and production of high yielding and local varieties of rice, jowar, bajra, maize and wheat in irrigated and un-irrigated areas during 1978-79 are given in Table I. The year 1978-79 has been chosen for the reason that this was not a bad year and the production achieved was 132 million tonnes which was just one million tonne below the production of 1981-82. Certain approximations are made since precise data at all India level were not available. Table II gives expected all India production of these crops if high yielding varieties and irrigation are extended to new cultivated areas. Generally high yielding varieties are treated with fertilizers and are sown in areas where irrigation is assured.

In the following paras of this section, we have worked out various combinations of the use of irrigation and high yielding varieties of seeds (along with fertilizers) to investigate how much increase in food grains is possible.

We find in Table I (Col. 5) that in 11.7 million hectares of areas under these five crops, high yielding varieties are not sown although irrigation is available. One of the measures for accelerating food production can be to ensure that high yielding varieties of seeds along with fertilizers are sown in these areas. If we

TABLE I

All India area, yield rate and production of high yielding and local varieties in irrigated area.

Year : 1978-79

Area in million hectares

Yield rate in kg/hect and
production in million tonnes

Crop	Irrigated high yielding			Irrigated local			Unirrigated local			Unirrigated high yielding		
	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction
1	3	4	5	6	7	8	9	10	11	12	13	
Rice	6	2352	22.6	7.2	1355	9.8	20.9	965	20.2	2.8	25	4.5
Jowar	0.2	2149	0.4	0.5	1183	0.6	11.1	572	6.3	4.3	13	5.9
Bajra	0.3	1813	0.5	0.1	936	0.1	6.4	454	2.9	4.6	77	3.6
Maize	0.6	2436	1.5	0.3	1486	0.4	3.8	1140	4.3	1.1	140	1.5
Wheat	11.1	2130	23.6	3.6	1160	4.2	6.1	676	4.1	1.8	102	1.8
Total :	21.8		48.6	11.7		15.1	48.3		37.8	14.6		7.3

Source:—“Consolidated results of crop estimation surveys on principal crops, 1978-79” by National Sample Survey Organisation.

TABLE II

Expected all India production with extension of high yielding (HY) varieties and irrigation to new areas

Year : 1978-79

Area in million hectares

Yield rate in kg/hectare
production in million tonnes

Crop	Irrigated local area with irrigated HY yield rate.			Unirrigated local area with irrigated local yield rate.			Unirrigated local area with irrigated HY yield rate.			Unirrigated local area with unirrigated HY yield rate.			Unirrigated HY area with irrigated HY yield rate.		
	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction	Area	Yield rate	Pro-duction
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rice	7.2	2352	16.9	20.9	1355	28.3	20.9	2352	49.2	20.9	1625	34.0	2.8	2352	6.6
Jowar	0.5	2149	1.1	11.1	1183	13.1	11.1	2149	23.9	11.1	1383	15.4	4.3	2149	9.2
Bajra	0.1	1813	0.2	6.4	936	6.0	6.4	1813	11.6	6.4	775	5.0	4.6	1813	8.3
Maize	0.3	2436	0.7	3.8	1486	5.6	3.8	2436	9.3	3.8	1405	5.3	1.1	2436	2.7
Wheat	3.6	2130	7.7	6.1	1160	7.1	6.1	2130	13.0	6.1	1024	6.2	1.8	2130	3.8
Total :	11.7		26.6	48.3		60.1	48.3		107.0	48.3		65.9	14.6		30.6

succeed in this direction, we can increase the production of these crops, which account for 80 per cent of food production, by 26.6 — 15.1 = 11.5 million tonnes (Reference : Col. 4 of Table II and Col. 7 of Table I). In a favourable year of good rains (like that of 1983-84), the increase in food production will be somewhat more than this. Even in a drought year like that of 1979-80, the production would have gone up by 8.1 million tonnes by adopting these measures.

Production of HYV

The second measure can be the adoption of high yielding varieties of seeds to even unirrigated areas. If we are completely successful in this direction, we can increase the production by 28.1 million tonnes (Ref. Col. 13 of Table II and Col. 10 of Table I). If good rains are available, the additional production would be more than this. Even in a drought year of 1979-80, the production would have gone up by 22.7 million tonnes.

These two measures do not envisage any additional investment on irrigation front and may increase the production by 36.2 million tonnes. During the year of favourable rains, the increment in production can cross even this level.

Further increase in food production may not be possible with the existing technology unless we tackle the irrigation front. The ideal situation would be, as is practically happening in Punjab, to sow the entire cultivated area with high yielding varieties of seeds and treat that with irrigation and fertilizers. In that case, our food production can be raised by 94 million tonnes. Even if we are able to provide irrigation only to those areas where high yielding varieties of seeds are already sown and adopt high yielding varieties in all the areas where it is not so far adopted, the production can go up by 52.9 million tonnes.

Use of fertilizers

One of the key elements in accelerating food production is the use of fertilizers. The growth in the consumption of fertilizers in the last 30 years has been phenomenal from a level of 0.06 million tonnes in 1951-52 to 6.00 millions in 1981-82. However, the growth rate decreased from 19 per cent in the pre-1965-66 period to only 10 per cent in 1966-67 to 1980-81 period. According to a study carried out by R. Nagraj of the centre for Development Studies, Trivandrum, the causes for deceleration of fertilizer consumption are neither a lack of supply nor the lack of effective distribution system. He finds that for small farmers, the spread of fertilizer use is restricted because of non-availability of credit.

It may also be pointed out that during the years 1980-81 and 1981-82, there has been an increase of about 60 per cent in the prices of fertilizers. During these years, which were years of almost normal monsoon, the growth rates in the consumption of fertilizers were only 4.9 per cent and 9.5 per cent respectively which may mainly be attributed to the increase in the prices. Dr. Gopal Sobti, Chief Executive of the Fertilizer Association of India, also explains the deceleration in consumption over these two years largely in terms of the sensitivity of farmers to the increase in fertilizer prices.

The year 1982-83, being mostly a year of drought, recorded a growth rate of 6.8 per cent in the fertilizer consumption. In spite of excellent rains and a relief of 7½ per cent in prices of fertilizers during the year 1983-84, it is estimated that the growth rate will be of the order of 12 per cent only. During Kharif 1983, the growth rate was only 8 per cent, the months of August and September, 1983 recording a marginal negative rate of growth compared to the corresponding period during the previous year, which was a drought year.

Although it is difficult to isolate the impact on fertilizer consumption of weather conditions and price relief, it seems the impact of the relief of 7½ per cent in prices of fertilizers has been only small in the face of high doses of increments already given.

Intensity of consumption

It has been estimated that only 45 per cent of the Indian farmers use fertilizers and only one-third of the cropped area is fertilized. And while only one-third of the total area is irrigated, irrigated crops account for 86 per cent of the total fertilizer consumption. Moreover, about 65 per cent of the total fertilizer consumed goes to wheat and rice. It has also been found that intensity of fertilizer consumption for 1981-82 (measured in terms of kg per hectare) was as high as 124 kg in Punjab, 67 kg in Tamil Nadu, 50 kg in Andhra Pradesh, 10 kg in Orissa and only 3 kg in Assam, the all India average being 32 kg. During 1983-84, we can expect only a small increase in all India average since the growth rates in fertilizer consumption are not large.

We know that there is a slow growth rate in Eastern and Southern India in the rice production as compared

to that in Northern India. The main reason for this appears to be the lack of use of fertilizers and improved seeds. As per rough estimates of National Sample Survey Organisation (1), it has been found that in Assam, West Bengal, Andhra Pradesh and Karnataka, the percentage area under the use of chemical fertilizers was only 2, 32, 36 and 25 respectively whereas the corresponding percentage in Haryana and Punjab were 89 and 94 respectively in 1978-79. Similarly, the percentage area under improved seeds in Assam, West Bengal, and Andhra Pradesh was 6.21 and 52 respectively whereas the corresponding percentage in Haryana and Punjab was 82 and 96 respectively. Irrigated area in Eastern and Southern Zones is also much less than that in Northern Zone.

Abundance of inputs

If we want to accelerate rice production, we have to supply in abundance the aforesaid inputs to the traditional rice growing States of Eastern and Southern India. Thus there is a need not only to increase the rate of consumption of fertilizers but also its use in unirrigated areas. It can be seen from Table I that about 96 million hectares of areas is sown under these five food crops both under irrigated and unirrigated situations. Out of this area, we see that about 48 million hectares are already under irrigation or under high yielding varieties of seeds. Also under 48 million hectares, neither irrigation is given nor high yielding varieties are sown.

We have to make efforts to treat the first category of area of 48 million hectares with fertilizers, and also about 32 million hectares out of the remaining 48 million hectares should be treated with fertilizers and also sown with high yielding varieties of seeds. Thus by the end of the Seventh Plan, we have to keep a target of bringing about 80 million hectares under the use of fertilizers. Further, there will be need to raise the per hectare consumption of fertilizers. It should not be difficult to raise the per hectare consumption of fertilizers to about 70 kg which is almost equal to the level in Tamil Nadu but only 56 per cent of the level in Punjab.

Thus, by the end of the Seventh Plan, there may be a need of 5600 thousand tonnes of fertilizers for these food crops. It has been projected (27 that about 9) 99 thousand tonnes of fertilizers would be available from domestic production by the end of the Seventh Plan. The remaining quantity can be utilized by non-food crops etc. and no imports may be necessary.

Lack of funds

The disincentive for the farmers in using fertilizers in unirrigated areas and in small holdings appears to be mainly the lack of finance with the farmers and the risk in losing even the cost of fertilizers if the crops fail. If the cost of fertilizers on an average is taken as Rs. 3000 per tonne, Rs. 1680 crores will be needed at the current prices to treat 80 million hectares of area under these crops with fertilizers. Government made a provision of Rs. 800 crores in the budget for 1983-84 for subsidy on fertilizers.

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The battle of numbers

Dr. N.K. Sinha

The birth rate can be brought down by motivating effectively the greater number of eligible couples to accept the family planning norm. Steps should also be taken to make contraceptives available to the users, says the author.

POPULATION INCREASE IS A SUBJECT of discussion in almost every forum. Concern has been shown at rate of growth of population in our country. Family planning programme received official attention right from the first Five-Year Plan. 1981 census result showed that we are 12 million more than the expected numbers as estimated by the Expert Committee.

Creating awareness

The Ministry of Health & Family Welfare claims that more than 55 million births have been averted since the inception of the programme and 29.33 per cent of the currently married couples have been effectively protected against conception as more than 45.0 million people have accepted sterilisation, 11.7 million women have accepted I.U.D. and about 10 million people are using various types of contraceptives. But Registrar General of India's Fertility Survey of 1972 shows that 47.01 per cent of the total live births in rural areas and 43.99 per cent of the total live births in urban areas were of fourth and higher order of birth. The Fertility Survey of 1978 by Registrar General shows that 38.43 per cent and 33.33 per cent of the total births in rural and urban areas respectively were of fourth and higher order of birth. 1971 census shows that 42.0 per cent of the total population were of the age of 14 years and below while RG's 1978 survey (1984 census detail tabulation is not ready) shows that the percentage of population in the age group of 0 to 14 years were 39 per cent.

The gradual change in attitude of the people is quite significant. Even in fifties people used to boast of being father/mother of seven or eight children, but now parents of two or three children feel proud of themselves. Instances are not rare when grown up sons and daughters have expressed anger against their parents on their mother going to hospital for fifth or sixth delivery. There are the signs of the change in social attitude. A favourable atmosphere has been created for acceptance of different contraceptive methods.

People have started feeling the need of a small family and they themselves come forward to accept sterilisation even without any motivation by any health or family planning personnel. This can be amply clarified by the fact that during 1977-78 when 'Shah Commission' was working in full swing, not a single doctor or para-medical staff had the slightest courage to approach anybody for motivation for acceptance of sterilisation. Yet during 1977-78 over nine lakh forty eight thousand couples accepted sterilisation on their own without any motivation which is more than the number of sterilisation acceptors during 1973-74 when 9,42,402 couples accepted sterilisation after proper motivation and persuasion by medical and para-medical staff. This shows that an atmosphere has been created in the country when every year more than one million couples will accept sterilisation on their own even if no motivational work is done but only services are provided. We should take advantage of such favourable atmosphere to boost up the programme.

Out of the 123.7 million couples within reproductive age group as on April 1, 1984 we have been able to effectively protect 29.2 per cent couples by different methods. On detailed analysis it would be found that 23.7 per cent of the couples have been protected by sterilisation, 2.15 per cent by IUD and 3.4 per cent by other contraceptive methods.

Couples in reproductive age group

It would be proper to have a look into the profile of the married couples of reproductive age group to

identify the gap which need coverage. According to an estimate of Ministry of Health & F.W. 13.00 per cent have no children, 17.1 per cent have one child, 18.4 per cent two children and over 51 per cent couples are with three or more children.

By the end of March '84, there were about 123.1 million married couples in the reproductive age group in our country. The number of married couples of reproductive age group with varied number of children are estimated as :

With three or more children	(51.5 %)	63.7 million
With two children	(18.4 %)	22.8 million
With one child	(17.1 %)	21.1 million
Without any child	(13.0 %)	16.1 million

Childless couples may be divided into two groups i.e. sterile couples comprising about 10 per cent (12.3) million and the rest i.e. 3 per cent are newly married.

As per such an estimate there are about 12.3 million unfortunate couples who have no child. At present our government do not have any programme for this unfortunate group. Of course various gynaecologists are treating and helping such couples with success on their own. To earn general goodwill the Family Welfare Department should take up some programme for the treatment of sterility cases. With small input, good programme can be organised with success and success stories can be published for the information of the general public.

Need to increase coverage

Rest about 3.8 million couples without children are newly married and should be given total coverage by various conventional types of contraceptives (mainly by condoms and pills). They should be encouraged to use condoms or pills to enjoy happy married life freely for 2 to 3 years.

63.7 million married couples within reproductive age group with three or more children are all suitable for adoption of sterilisation and should be educated properly by explaining the relevant details of various methods of different types of tubectomy and vasectomy so that they may not have any doubts about the after effects of these operations. As per estimate allowing the attrition factor about 23.7 per cent of the married couples of reproductive age groups have been covered by sterilisation which includes some couples with two children and some even with one child. Record shows that about 80 per cent of the sterilisation acceptors have three or more children. Hence it is estimated, that about 18.9 million out of about 63.7 million couples with three or more children have already accepted sterilisation. This leaves about 44.8 million couples in this group to be motivated for acceptance of sterilisation. Target to cover by sterilisation per year upto 2000 AD varies from 4 to 8 million. So approximately 38 million

of this group will have to be covered by I.U.D. or condom/pills.

About 22.8 million couples with two children are actually a borderline group suitable more for sterilisation but quite a number of them may not like to accept sterilisation at this stage and some of them may desire strongly for a third child. However, out of 22.8 million, if it is presumed, that about six million had already accepted sterilisation as per record, thus about 16.8 million couples remain to be motivated to accept either sterilisation, I.U.D. or condom/pill. It will be quite ambitious to motivate one or two million out of this group to accept sterilisation every year. The rest 14.8 million should be covered either by I.U.D. or condom/pills.

21.1 million couples with one child are to be covered by either I.U.D. or condom/pills. Though from the record it is observed that about 0.8 per cent of the total sterilisation acceptors are parents with one child, it would be desirable not to persuade one child couple to accept sterilisation as the 'infant mortality rate' of our country is still very high.

The above analysis shows that there are about 80.6 million (about 44.8 million couples with three or more children, 14.8 million with two children and 21.0 million with one child) married couples who should be persuaded to accept condom/pills or I.U.D. as a measure to limit their families. Motivational campaigns, social marketing and supply of condoms and pills through fair price shops, cooperatives, post offices and various hospital and dispensaries should be encouraged. Our capacity to persuade married couples to accept I.U.D. is limited. We have not been able to achieve even one million figure in any year earlier than 1982-83.

In 1982-83 and 1983-84, 1.07 million couples and 2.8 million respectively accepted the same. We shall have to change the unfavourable attitude of the lady doctors and other female para-medical staff towards I.U.D. We should take up programmes to cover about 3.5 million newly married and about thirty-five million couples with one or two children by either condom/pills. In addition to this a sizeable group of about 45 million of couples with 3 or more children are also to be covered by condom/pills/I.U.D. as they will not accept sterilisation. Taking the overall position in consideration it is estimated that efforts should be made to cover about eighty million couples by suitable programme of condom, pills and I.U.D.

So far enough coverage has not been given to the newly married couples and the couples with one or two children whereas this is a most important group of about 25 to 40 million couples with high fertility rates.

According to the estimates of the Department of Family Welfare there are about 10 million conventional contraceptive users. There may be another 5 million users who may be using contraceptive on

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The development of big industries should be so regulated and product mix so controlled and phased that the small labour intensive enterprises are not driven out of existence. The author calls for integrated development of the industrial structure.

ECONOMIC PLANNING WAS ADOPTED in India over three decades back with the aim of accelerating the pace of development consistent with the socio-economic objectives enshrined in the constitution. Massive investments have been made, far-reaching socio-economic and institutional changes introduced and a comprehensive regulatory mechanism embracing monetary, fiscal and physical controls developed within the framework of mixed economy. As a result, the pre-independence stagnation of the Indian economy has been shaken off, impressive increases have been recorded in national income and in agricultural and industrial production and a considerable degree of technological sophistication and self-reliance have been attained.

Judged by the historical experiences of the currently developed countries as well as the teachings of the growth economists like Rostow and Lewis we should be fast approaching the stage of self-sustaining growth. However, our achievements have fallen far short of our needs, resource potential and aspirations owing to faulty strategy and misplaced priorities of the Plans streaming from the obsessions of our elite with western goals of modernisation and development, value system and technology. The problems of mass poverty, unemployment, rampant inflation, inequality, economic inefficiency, conspicuous consumption and misdirected production and technological dualism have got accentuated over the years and are casting a dark shadow on the Seventh Five Year Plan.

Both can co-exist

Dr. O. P. Mahajan

The Seventh Plan must look far beyond five years and the narrow interests of the elitist sections camouflaged for long as the national interests and cry a halt to strategies that have led to the present grim situation if it is not to go the way of the earlier Plans.

Essential elements of the approach

Attempt at revamping of the planning strategy must begin with adoption of concepts and goals of development in keeping with our native value system, resource potential and social need. Growth of national income, modernisation, increase in industrial output, growth of exports, etc. are of little significance in themselves. They have to serve a higher social purpose—mitigation of poverty, removal of acute unemployment and underemployment, increase in the availability of goods and services of mass consumption and improvement in the quality of life. The development of different units of economy—states, regions|areas|cluster of villages—must be based on the principle of comparative advantage, instead of equating development|regional balance|rural-urban balance and all that with the dispersal of large manufacturing industry and establishment of a few 'status symbols' like heavy and modern capital-intensive conspicuous-consumption goods industries as done hitherto. A few corollaries inevitably follow from this.

Engine of growth

Firstly, agriculture must be regarded as the 'engine of growth', and made the pivot of whole development effort instead of being relegated to the subservient role under which resources are to be squeezed out of it for industrialisation and urban development. It is not just a question of increasing financial investment. On rough calculations, financial outlay on agriculture and allied activities has not been much below the oft-repeated ideal of 40 per cent. An adequate effort means detailed, concrete and disaggregated but simple and lowly exercises as to what

the sectoral targets mean quantitatively and qualitatively in terms of the availability of various strategic inputs not only at the state and district levels but also at the level of each farm. These down-to-earth exercises are too prosaic, cumbersome and, therefore, too unattractive to merit the interest, energy and time of the top-level sophisticated scientists, model builders, technologists, management experts, bureaucrats and statisticians.

Although their tribe has been increasing fast, this vital area has been neglected or left to men of lower calibre, training and motivation. Little wonder that some of the most crucial problems besetting our agriculture—extensive deforestation and denudation of hills, acute and widespread degradation of environment accentuated by massive energy crisis affecting the rural and urban poor, the destruction of natural watersheds, salinity and water logging of land, periodic floods and droughts, siltation of tanks and reservoirs, the handicaps of dryland agriculture and semi-arid tropics—have continued to stare us in that face for want of adequate problem-oriented research and wide dissemination of the results of applied research and experience of progressive regions of the country. Millions of hectares of arable and forest land have been going waste every plan period, and other millions remaining unreclaimed.

Socio-economic conditions

Secondly, the socio-economic situation likely to prevail in the next two or three decades does not hold out any promise of large scale transfer of population from land to industry—the western solution to problem of overpopulation and unemployment. So jobs have to be created on the farm itself by promoting cottage and small industry in the rural areas, processing the agricultural produce and producing consumer goods for local needs. These industries must be supported by massive R & D effort to raise their productivity. Gradual introduction of sophisticated production patterns is to be attempted as the economic situation warrants.

Neglect of the small sector

This is not just a realistic reiteration of lip-service paid to cottage and small industry and the slogans like 'small is beautiful' in the earlier plan documents. It calls for a radical change in goals of development and plan strategy so that pride of place is no longer given to the easily measurable field of large industry—the large aggregates and their natural concomitants : giant multi-purpose dams and irrigation works, big technology and consequently big universities, IITs, glamorous research Institutes and Laboratories and now 'science cities' also, net works of luxury travel, five star hotels, luxury residential Bhavans and residential complexes and a host of service industries catering to conspicuous consumption of the elite. All these activities have gone too long under the widely accepted but ill-defined goal of modernisation as a concomitant of development and led to the neglect of small social and economic micro-

cosms—the small and marginal farmers and craftsmen following lowly occupations. As a result technological gap has been widened and a dual economy created.

Lop-sided development

While solution to relatively simple problems of resourceless agriculturists, small handicraftsmen and village industries remains stalled for want of financial resources and trained manpower, there is no dearth of finance and scientific manpower to carry on 'fundamental' research in creating new wants and consumer demands, developing luxury house designs and styles, luxurious travel facilities, ultra-modern means of entertainment and liaison services for manipulating licences, quotas, building contracts, tax dodging and touting, nor of enterprise in arranging their supplies. Besides lakhs of enterprising and resourceful people are engaged in adulteration, smuggling, cornering of stocks, black marketing and a host of similar activities which contribute nothing to production of socially useful goods but constitute a mind-boggling part of the national product as conventionally measured.

The Seventh Plan must strike hard to prevent this colossal waste and channelise these vital resources—highly skilled, trained enterprising scientists, architects, finance and management experts, business executives etc.—to areas of genuine production in agriculture and industry irrespective of considerations of money cost-return. It must avoid the mistaken priorities of the earlier plans and stop devoting a lion's share of the research and technology outlay to the prestigious, but socially less useful, fields of research, which, in imitation of the advanced countries, attracts our best talent and brain and, it needs to be emphasised, in which it will be quite difficult to compete with the countries with billion-dollar budgets much less outshine them. In the field of research investment as in others our priorities must no longer be lop-sided and goals misconceived unrealistic and unrelated to our needs and resource potential as hitherto.

Need for integrated development

The foregoing argument should not be taken to mean that a ban on large scale capital intensive industry is being suggested here. Far from it, it is granted in the strategy proposed here that modern capital intensive techniques and production patterns will have to be used to develop heavy engineering, heavy electrical, metallurgical, chemical, fertilizer and other industries essential for national defence, modernisation of agriculture and other essential sectors. Support of R and D for this sector has to be ensured so that the economy does not slip back into a state of primitive stagnation. The contention of the present article is that the development of these industries should be so regulated and product mix so controlled and phased that it does not drive the small labour-intensive enterprises out of existence; rather an integrated industrial structure needs to be developed.

essential precondition for the success of this strategy is that strict control over product-mix in the industrial sector and effective demand management have to be imposed to curb the colossal waste involved in the production, consumption and import of goods and services of low social priority and thereby to subserve the social and economic ends of planning. It may be stressed that "the weakness in India's strategy has not been that the so-called heavy industries received too much emphasis but that the need to discriminate between the articles of consumption received too little attention." It is, however, not easy to impose these curbs, chiefly because over the decades several powerful vested interests of elite consumers, producers, bureaucrats and their influential friends have developed in the production and availability of articles of conspicuous consumption. For one thing, an ever increasing number of consumers is bringing more and more of such goods within the pale of necessities which would have been dubbed as vulgar ostentation a few years back.

Conspicuous consumption

Apart from the social and political implications of the development strategy hitherto pursued, blind imitation of the western styles of development has caused stupendous waste of scarce resources and misdirected investment to sustain the living styles of the elitist sections of the community and, therefore, has tended to perpetuate poverty by preventing flow of resources in the production of socially useful goods and services. Worse still, it has sharpened the appetite of the masses who have begun to equate development with acquisition of articles of conspicuous consumption, non-availability of which is causing so much agony and frustration and is militating against honest labour. The dilemma facing the currently underdeveloped countries is that tigers having tasted human flesh once have become man-eaters. In such situation poverty is bound to be endemic since our nation, on reasonable calculations, simply cannot muster sufficient financial and physical resources to meet the basic needs of about 700 million people if articles of conspicuous consumption somehow continue to get considerable priority. Even the western countries are getting disillusioned with their styles of living, maintained for long by colonial exploitation in one form or another. The cost of such thoughtless growth is fast becoming prohibitive.

The farsighted among the planners, statesmen, bureaucrats and educationists in the country have sufficient appreciation of the red signal and preach virtues of austerity, indigenous styles and Gandhian ideology but the people in general have, both in thought and action, turned their back on Gandhi. Those who can afford, forego no opportunity of displaying luxury and consumption. In this situation there is general scorn of simple living. Production patterns, which are dubbed as primitive and reactionary obscurantism, therefore, are condemned as meriting no serious consideration.

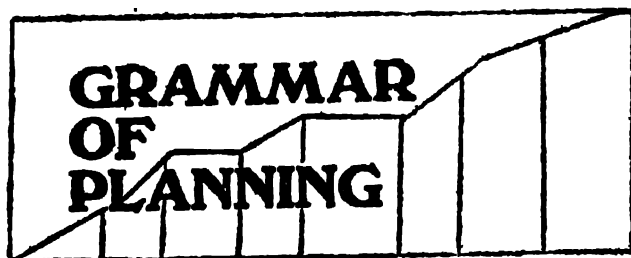
But the crux of the question is how to bring about a luxury-free society so essential to carry out this approach to development in an open and free society in the face of strong internal and external pressures to the contrary.

Leadership on trial

In a totalitarian economy there is no difficulty since the state controls all investment and consumption decisions and hence the composition of national physical product, and also enforces isolation and austerity on the elite and the masses alike. The countries of Europe and North America in their transformation period were lucky in that consumerism had not emerged yet and the prevailing value system permitted single-minded attention to accumulation. In this connection Keynes' famous observations on capital accumulation in the 19th century Europe are very illuminating: "If the rich had spent their new wealth on their own enjoyments, the world would long ago have found such a regime intolerable." The currently under-developed countries are at a great disadvantage in this respect due to deep inroads of the demonstration effect of the western living styles and production patterns. It is a tragedy that the underdeveloped countries have missed the early phase of capitalism when luxury goods were yet to arrive, missed the vigour of the early phase of capitalism, but are allowing themselves to be victims of its degenerated later phase.

In India, e.g., no serious attention has been paid in the planning period to curb ostentation and to educate the people on the imperative need of austerity by example. There has been too much of double talk. People would simply not accept these curbs unless the dedicated leadership sets an example. Institutional changes have so far been of little avail. So the existing trends are most unlikely to be reversed under any market oriented, democratic system. And the alternative of a regimented economy is a 'totalitarian nightmare', totally unacceptable under the present value system obtaining in the country. Is it too much to expect that the democratic system would throw up a dedicated leadership at different levels to secure acceptance of a moratorium on production, import and consumption of luxury goods and thus steer the economy clear off the existing predicament through example rather than preaching and ensure a fair rate of modernisation without bringing in its trail all the costs that have gone with it under the free market system or the weak type of planning hitherto practised in India? There is no use playing down the heavy odds, however.

Reluctance of a democratic state to use coercion and its preference for negotiations and consensus for the achievement of social and economic ends is understandable. But there is nothing inherent in a democratic state to justify its behaviour as a 'soft state' which has been the hall-mark of the Indian democracy, a misconception arising from lack of proper understanding of democratic processes and institutions. Democracy is not licence.



P. R. Dubhashi

The project planning

In the process of district planning (please see last issue), the local organisations like panchayats, block development boards, land development banks, lead banks, and district development councils have a definite role to play and must prepare development plans for their own areas of activity. In addition, the local government institutions and area public leaders have to pool their thinking and expertise to formulate sound and scientific development plans. Here in this chapter, the author dwells on project planning which is considered to be the final point of plan formulation and the first point of plan implementation. It is the vital link between planning and implementation.

THE DISAGGREGATION OF the national plan, whether sectorally or spatially, has ultimately to descend to an individual project in some particular field of economic activity. Project planning is, therefore, rightly described as the final point of plan formulation and the first point of plan implementation. It is the vital link between planning and implementation.

From an economic point of view a project represents the investment of a specific chunk of the scarce resources of the economy for the production of a flow of goods and services. Every such investment is a cost and a risk. But the cost becomes worthwhile and the risk becomes a calculated risk if the investment in the project is preceded by the formulation of a project report.

Project report is a comprehensive and systematic compilation of data, technical and economic, pertain-

ing to the project so as to provide a rational basis for the assessment of the costs and benefits, advantages and disadvantages, which emanate from the specific dose of investment embodied in the project.

Economic experience of development planning in underdeveloped countries has repeatedly shown how in the absence of careful project planning, national resources are wasted.

A project is embedded in an economic environment. It does not exist in a vacuum. It is a radiating centre from which impulses flow to the rest of the economy. At the same time, the success or otherwise of a project is itself influenced by the factors in the economic environment. A project report has not only, therefore, to deal with the project per se but with the economic relationship between the project and the economic system.

Requisites of a project

The project report has to go through a number of stages like identification, formulation, appraisal, supervision and evaluation. A project to succeed must be intelligently identified scientifically formulated, competently appraised, efficiently implemented and rigorously supervised if it is to pass the test of a successful project.

A project could be identified either from the source or the destination. Thus, different types of available natural resources would provide the source of raw material for the projects and thus suggest the possibilities of setting up such a project. On the other hand, the market should also provide indication of the possible opportunities. A project may be a part of either a sectoral complex or a geographical complex. It may either be completely related to the domestic economy or could be inspired by the export possibilities. In any case, once a possibility suggests itself, the project could be identified tentatively.

Then follows the need for a pre-investment survey on the basis of which preliminary project report has to be prepared indicating various possible alternatives. The preliminary project report thus enables the

selection of the final choice of the project. After the choice is made, the stage for a detailed project (DPR) report is set. The detailed project report has to consist of three parts—project engineering, project economics and project organisation.

Project engineering includes the details of the production process, plants and machinery, site and buildings, schedule of construction of building and erection of machinery and supplementary works, like water supply and electricity.

Project economics

Project economics begins with the market analysis or demand analysis. Indeed, identification of demand and market is the starting point of project planning. Demand is the function of income and price. At the prevailing price, some part of the demand might be unfulfilled. It is the unfulfilled demand that has to be met by the new project.

The data regarding the market analysis has to be based on the information made available by the surveys both of facts, attitudes and opinions and consumer scales of preferences. The time series of the past could be projected in future by extrapolation. However, this cannot be done blindly since the future picture might be different from the past. There might be changes in population, income, scale of preference, elasticity of demand as a result of various external factors. These must be taken into account in forecasting the future demand for goods or services which the new enterprise seeks to provide.

If the market survey establishes an adequate demand for the product of the new project then comes the question of determination of size and location. The size has to be limited to size of the unfulfilled demand. However, if the unfulfilled demand is less than the minimum technical size, the project cannot be established. If however, the unfulfilled demand is much greater than the technically feasible size, then a choice has to be made as between the alternative sizes of plant and machinery. The economics of various sizes has to be studied and the optimum size has to be located.

Location

As regards locations certain technical considerations have to be taken into account like the availability of water or electricity or minimum administrative and postal facilities. However, if these basic factors are available, the choice regarding location has to be governed by consideration of an optimum location. In deciding this, the cost of transport of raw material has to be weighed against the cost of sale of finished products. Some enterprises have to be near the place of the production of raw material. If the raw materials are bulky or costly to transport or are of perishable nature, or lose in value in transport, like sugarcane, the location has to be near the place of production of raw material. On the other hand, some

other projects are governed by the advantages of marketing the finished products and tend to be located at big consumer centres in big towns and cities. In determining the optimum, the size and location benefits are to be weighed against costs and that choice has to be made where b/c or $b-c$ is the maximum.

Capital input

The next item in project economics is the assessment of investment—fixed and working capital. The fixed capital consists of plants, machinery, building, etc., while the varying costs consist of the cost of material, labour, fuel charges, water charges, rent, etc. Administrative overheads will have to be considered as fixed costs.

Then comes the need for preparing the project budget for the entire project period showing for every year additional costs and additional benefits from the project. In the initial years, the additional cost may exceed additional benefits. But if over the entire project period benefits exceed the cost the project may be economical. One formula to determine whether economy of the project is sound, is to arrive at the present capitalised value of the flow of goods and services. If this exceeds the project investment, the project may be economically worthwhile.

The last item in project economics is the determination of the source of finance for meeting both the capital cost and the varying costs. Some part of the capital is owned while the rest is borrowed. Every enterprise must have a proper debt-equity ratio. If the debts are excessive and high interest rates on them have to be paid, the project may not be worthwhile.

Management

The third part of the project report is regarding organisation and management. The organisation may be in the public sector, private sector or the cooperative sector. It has to have an adequate body of membership or share-holders. Its management structure has to be sound. It must have the necessary technical accounting and managerial staff who should be properly qualified. The procedure of recruitment and the structure of salaries and other allowances has to be worked out. An organisational chart, a manpower plan and a job chart has to be prepared.

The above-mentioned is only a general outline of the project report. But a project report has to be tailor-made and has to meet the unique requirement of every enterprise.

If a shelf of economically sound and technically feasible projects is kept ready, it would be possible to fill up the details of the framework of a general investment plan. Without project reports, a plan merely in terms of investment cannot be operational.

(Next issue : The substance of planning)

Government should find resources to raise this subsidy during the Seventh Plan in order to supply to farmers (particularly marginal and small ones) fertilizers at highly subsidised rates. This is an imperative necessity in the context that many countries subsidise chemical fertilisers very heavily to promote their intensive application by farmers and thereby encourage the wider application of high yielding varieties requiring such intensive application. Simultaneously, efficiency in the production of fertilizers is also to be geared up.

Along with the application of fertilizers as discussed above, high yielding varieties of quality seeds are also to be sown in all the areas where the fertilizers are used. There may be a need to supply seeds at subsidised rates in a big way to encourage the small and marginal farmers to use these seeds. Crops insurance schemes are also to be introduced urgently to cover the risks of farmers who would be using fertilisers and seeds in rain fed areas.

If these measures are successfully adopted, we can expect an increase of 45 million tonnes of these food grains over the level of 1978-79. These measures generally would not require additional investments on irrigation.

Conclusion

The paper points out the limitations of various measures for increasing the food production. For example, in areas where irrigation is available but only local varieties of seeds are sown, if we sow high yielding varieties of seeds along with fertilizers, we can expect an increment of the order of only 11.5 million tonnes. Even in an ideal situation when the entire cultivated area is provided with irrigation and also high yielding varieties of seeds and fertilizers are used, we can get an increment of only 94 million tonnes. This measure will, however, require huge investments in irrigation.

Our immediate aim, however, should be to achieve the increment of 45 million tonnes during the Seventh Plan by adopting the measures, as discussed in Section 3, which do not envisage huge investments on irrigation. Side by side, investments on irrigation projects should also be made within overall constraints in plan resources since this would help in not only converting unirrigated areas into irrigated ones but in also increasing the cropping intensity which is only 1.2 at present.

Extensive application of technology has to come to our rescue if large scale increments in food production are to be achieved. □

their own even then vast majority of the fertile group of couples remain uncovered. There seems to be no programme to cover this vast group of fertile couples in near future even upto 2000 AD as the highest annual target recommended by the 'Working Group on Population Policy' on conventional contraceptive, is only 12.1 million in the 'low priority sterilisation' group and this has been accepted by the Government of India.

It will be too much optimistic to presume that the sterilisation target will be achieved every year upto 2000AD. Hence this type of programme will not bear fruit ultimately and it will not be possible to bring down the birth rate to 21 per thousand by 2000 AD, only by sterilisation programme. Majority of the developed countries have brought down the birth rate by late marriages and using conventional contraceptives including oral pills. Hence the target to cover married couples by conventional contraceptives will have to be increased accordingly and different programmes for the same should be introduced. Otherwise target of reaching reduced Reproduction Rate by 2000 AD will remain a dream. Well designed programme will have to be introduced to increase the availability of oral pills and condoms in rural and urban areas. □

The 'scheming' fisher women of Pondy

THE FISHER WOMEN of Pondicherry never had it so bad. They undercut each other. They had no regular place to sell their fish.

Now, things have changed. They never had it so good. They sell their wares in an organised market. No one undercuts another.

It all began the day when a hundred of them marched to the local United Commercial Bank and sought the advice of the Branch Manager. He advised them to pursue their traditional occupation, selling fish. But he told them that by organising themselves properly, they could make more, doing the same work. He wanted them to keep the fish clean and not to undercut each other. He promised them loans ranging between Rs. 300 and Rs. 500 to get ready to begin a new by buying baskets, ice and balance to ply their trade.

The fisherwomen did as they were told. They began buying fish wholesale. None would sell below a fixed retail price, and they now have got a clean and spacious area in Chinna Market to sell fish. Since they do not compete with each other their earnings almost doubled. On an average, they make around Rs. 20 a day. □

Implementing IRDP A challenge

Gyanendra Sharma and K.C. Tyagi

IRDP, started six years ago, has been extended to all the development blocks in the country. A large amount has been provided in the form of loans and subsidies to improve the lot of the rural poor. The author points out that due to faults in identification of the beneficiaries and lack of credit supervision, the programme has not produced the desired results.

• THE INTEGRATED RURAL DEVELOPMENT PROGRAMME is being implemented through a network of District Rural Development Agencies (DRDAs) in every state. The DRDAs were created in all states to implement the major rural oriented programme through these agencies. On 2nd October 1980, when IRDP was extended to all the 5011 development blocks of the country, the task to implement this programme was assigned to the DRDAs.

The DRDA in a district implements several schemes for the benefit of the rural poor. Notable among these are milch cattle (buffaloes and crossbred), piggery, mule cart, TRYSEM, farm forestry, bio-gas etc. Each DRDA under the new pattern is headed by the Chairman (Deputy Commissioner of District) followed by the Chief Executive Officer (Addl. Deputy Commissioner) and they are assisted by a team of Assistant Project Officer (APOs) in various fields. The category of rural poor who get benefit through DRDA are landless agricultural labourers, small and marginal farmers, artisans and all those who are living below poverty line.

People below poverty line are identified based on the criteria—a family of five persons earning annual income of Rs. 3500 or less.

The main efforts of DRDA are directed towards the upliftment of the rural poor, by way of increasing income and providing infrastructure. The Government is spending crores of rupees in the form of loan, subsidy and providing infrastructure to the rural poor. How far this amount has been utilised in the real upliftment of the poor? Now, it is high time to assess our performance in various fields of rural development. Not going into details of all the aspects of IRDP implementation, the paper lays emphasis on two aspects i.e. identification of beneficiaries and credit supervision.

Identification of beneficiaries

Commenting upon the procedure followed for identification of rural poor, a PEO report states that: The work of identification by and large was not done with the thoroughness it deserved. Mostly Patwaris or VLWs are entrusted with the task and they generally considered it to be yet another addition to their enormous assignments and, therefore, many of them did not or could not devote the required attention. The report further brings out the wilful concealment of the size of land holding by large farmers in order to avail benefits. Many big landlords transferred their lands to their sons and got them identified as small farmers. It will not be out of place to relate these findings in the present context.

Based on the household survey the rural poor are identified and application forms are filled by DRDA officials in organised identification camps. A very serious problem being faced in these camps is a biased selection. In a few villages, where the Sarpanch, landlord want a special section of people to benefit, the genuine poor are left. This has been revealed in a research study on the implementation of IRDP in Karnal district.

There is no one to speak for the genuine poor who are overlooked. How will this lead us to alleviate poverty? Are't we drifting away from the scheduled path? We have to answer these questions and simultaneously rectify our mistakes.

In case of milch cattle scheme, the beneficiary has to produce the buffalo/crossbred cattle, he intends to purchase alongwith the seller in organised purchase camps. A team comprising bank officer, Veterinary Doctor, BDO, Sarpanch are present to supervise the camps. There have been instances when a beneficiary has not really purchased the buffalo. He just hired the same from some colleague whom he paid some gratification. This happens when a team of 5—6 officials are there to supervise. The beneficiary gets the net Rs. 2000 (if loan amount is Rs. 3000) in his pocket without any investment. He does not bother about the subsidy amount of Rs. 1000 which in a few cases goes to the functionaries who pass such shady deals. Such practice reflect the lack of sincerity and dedication on the part of officials. Today, the beneficiaries are really smart, they are no more innocent. They think that the loan/subsidy amount is nothing but money which can be earned without spendig anything.

A very wrong concept of IRDP is developing. The very aim of the programme is being defeated. This poses a great challenge to our administrators to review the implementation of IRDP at national level.

Credit supervision

The lynch pin of the benefit oriented programme has been to arrange credit from financial institutions including commercial banks to enable them to identify families which command real resources. A few evaluation studies reveal that ineligible poor through fraudulent practices get benefits. The result is that they turn into wilful defaulters. The local political activists also advise them not to repay. This has given rise to a number of irregularities in the scheme implementation. As a result, the proportion of defaulters have gone up above 60 per cent in most of the States. This is how a wrong selection of beneficiary creates numerous problems.

To overcome this, one way of reducing the overdues is to link future assistance with repayment performance and to allow interest subsidy to non-defaulters. Similarly, assistance in kind and proper identification of beneficiaries and ensuring the utilisation of the assistance for the declared purpose through continuous monitoring will help in increasing the repayment.

Lack of sincerity

IRDP was geared into action six years ago and has been extended to all the 5011 development blocks of the country. Though we do not expect any spectacular results certainly a ray of hope should have been visible by now. But it is missing. Our planners are moving ahead with higher targets in every subsequent plans. But are these increased financial targets going to bring improvements in the qualitative aspect of beneficiaries. Certainly not. In view of this, isn't this time to give emphasis on proper training of officials to enthuse them with a sense of sincerity and dedication

Thus, the educational component deserves special mention in this regard. To accomplish this, it is high time that policy makers devised some linkage mechanism to utilise the facilities of existing educational, research and other such organisations in the area to achieve objectives of the programme. Rather DRDA needs to be given such liberty to explore the possibilities of creating healthy linkages with the various agencies for the benefit of the programme. Accordingly, policy makers may issue policy decisions at national level so that such linkages gets more strengthened.

Revitalizing DRDAs

In view of the present problems in implementing IRDP, authors suggest a linkage mechanism to revitalise the project implementation through DRDAs.

"DRDA occupies a top position in the suggested linkages. In the present set up the organisations such as commercial banks, ICDP, Block and Insurance companies have an important role in materialising the benefits for the rural poor. DRDA acts as a coordinating agency to provide loans to beneficiaries ICDP though does not have defined linkage, provides technical followup services. Block office assists DRDA in identification of beneficiaries by conducting household surveys and Insurance officials provide a system for the security of the benefit provided to the rural poor.

In order to function in an integrated manner, DRDA requires a series of linkages with various governmental and non-governmental organisations as well as with research institutions dealing with related issues of development. Attempts have to be made through such vertical and horizontal linkages to bring in the necessary supplies and services that the community cannot provide for itself. It also requires educational and communication efforts to help local people to see the relevance of the schemes to their own needs, to obtain local support, to encourage people's participation and to initiate and help develop local organisations.

All these could be achieved by educating the beneficiaries about the role of each department and by motivating them to be sincere while utilising the service of these department. Then only we can hope to succeed in providing the benefits which will really contribute to the increase in income of the beneficiary. This educational role can be performed by Extension Education departments of ICAR institutes, agricultural universities, Krishi Vigyan Kendras, Krishi Gyan Kendras etc.

If we define these linkages as suggested, in proper perspective and then gear these into action, we can certainly hope to revitalize the implementation of IRDP by giving DRDA a more broader look and giving recognition with regard to the coordinating role.

Gold mining in India is carried out only by Bharat Gold Mines Limited (BGML), a Government of India Undertaking.

Between April 1983 and January 1984, BGML produced 936 kgs. of gold.

Gold production in 1983-84 is expected to be 1200 kgs. In 1982-83 it was 1369 kgs.

A new mine, at Yappamanna in Arantapur District in Andhra Pradesh, was commissioned recently. It is expected to produce 191 kgs. of gold in its first year.

As the old gold mines like Kolar are nearing total depletion, the BGML is diversifying its operations and producing mining machinery, drilling rods etc. for other mining companies.

THE TOTAL LENGTH of the National Highways in the country has risen from 21,440 kms. as on April 1, 1947, to 31,398 kms. as on March 31, 1984. The number of the National Highways has also increased from 37 to 64.

During the 1947-51 period, two roads were added to the system with an overall length of 815 kms. Four more roads comprising 1,514 kms. were added in the Second Five Year Plan. As such, in early sixties the National Highways network stretched to 23,469 kms. The Fourth Five Year Plan (1969-74) accounted for a quantum jump in the National Highways system when 11 roads aggregating a total length of 4,819 kms. were included in the system taking the total length of National Highways to 28,819 kms.

There were only marginal additions in the First, Third and Fifth Five Year Plan periods and in the interregnum period. However, the Sixth Plan gave another boost to the National Highways when seven more roads with a total length of 2,375 kms. were added.

The funds for the preservation and proper upkeep of the National Highways are provided by the Union Ministry of Shipping and Transport. Although there is persistent demand for inclusion of various road networks to the National Highways system, it has not been possible to accelerate the pace of developmental activities of National Highways due to paucity of Plan resources.



VOL. 28 NO. 18

**Rising population and
environmental degradation**

Yojana

OCTOBER 1-15, 1984 RUPEES 1.50

**Growth sans justice
NEXT ISSUE
Public sector - a
different angle**

Jobs for the rural unemployed

AN AMOUNT OF Rs. 230 crores has been earmarked as Central allocation under the National Rural Employment Programme (NREP) for the year 1984-85. The State and Union Territory Governments have to provide an equal amount as their matching contribution under this programme. Employment generation target of 309.129 million mandays has been fixed under the NREP for the current year and the target is likely to be achieved.

In the case of the Rural Landless Employment Guarantee Programme (RLEGP) an amount of Rs. 500 crores has been earmarked for this programme and employment generation target of 300 million mandays has been fixed.

The NREP and RLEGP are the two major programmes for providing wage employment in the rural areas. While the former envisages generation of additional employment opportunities for the rural unemployed and under-employed, including the landless, the RLEGP has the objective of improving and expanding employment opportunities for the rural landless with a view to providing guarantee of employment to at least one member of every landless labourer household upto 100 days in a year.

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Rising population and environmental degradation

Ashok Mitra

Unless demographic growth is contained, environmental control is bound to prove a longer and more dubious haul than it does now. As population growth can be effectively checked when people are brought up well enough to want fewer children, environmental degradation can be stopped by helping people to appreciate through various improvements in level of living to want to conserve their perishable resources and promote renewable resources, says the eminent demographer and administrator.

IT HAS ALWAYS BEEN THERE: the menace of environmental degradation in India. Only until about half a century ago, it enjoyed low visibility. Visibility has been growing, especially in the last thirty years. It looms so large now that it threatens to overshadow and even destroy much healthy growth, unless it is cut down to size by determined national effort. Unfortunately, signs of this determination are far from propitious.

Several factors have contributed in large measure to this mounting and ominous visibility. As a demographer, I would naturally put rapid and accelerating population growth since 1921, more so since 1951, as a prime reason. The other major reasons may be divided into positive and negative categories, to either of which population growth is common. I shall call

one group positive because although the effects of this group are still largely deleterious, they can be mostly turned around with wise manipulation to environmental improvement. But the other group, I shall call negative, have no such redeeming features and, if allowed to thrive, will present mounting obstacles. Although population has started to act negatively at the present frightening level of 700 million, it still hovers more on the side of a positive factor than a negative one. But that advantage is getting exhausted.

Among the positive factors one must mention the giant strides—in contrast to the small halting steps that had been taken before 1951—towards economic growth and development in terms of agricultural and industry. These provided the means of growth as well as those of curbing environmental degradation. It is, however, another matter that we have made precious little use of the power that this growth has placed in our hands. The other positive factors of which we have made practically no use either, are the acquisition of immense scientific and technological knowledge and skills and the rapid expansion of our development infrastructure in all its varied aspects in rural and urban areas.

These positive factors which I have compressed to a very few in number, but which naturally subsume a complex network of hundreds of other factors to our credit, have given us the means of containing and even reducing environmental degradation, if we were so minded.

Negative factors

There are some negative factors which as in the case of the positive ones, subsume an equally complex network of other factors, which are operating against conservation. The first is the growing extent of income inequalities, the upward swing of the poverty,

—
Based on excerpts from a Silver Jubilee address delivered recently at the Institute of Economic Growth, Delhi.

line, the inordinately heavy concentration of wealth and privilege among a very small proportion of the population. With this goes the denial of access to and utilization of social and distributive justice, not only to the vast majority of the population but also to extensive geographical regions and tracts of our country. The effect of these inequalities and denial of distributive justice has bred indifference and even hostility to efforts at conservation. The question that looms large with the vast majority of our deprived population, who live largely without aspiration, without hope for themselves and their children, is conservation for whom and why.

The second major negative factor is our illiteracy and lack of education, nonformal as well as formal which keep all knowledge and desire for environmental improvement, and simple collective effort towards achieving it, out of the reach of the majority of our population. As a result they know no better than what they are made to suffer from, regarding the latter as inevitable as the ways of God. The ill effects of illiteracy and lack of education are most manifest in our approach to both agriculture and industry, in our attitude towards and awareness of the biosphere, water, air, sound, soil, minerals and human settlements. They are reflected most of all in our lack of awareness and demand as well as low utilization of whatever social and community services we are entitled to.

The third is our lack of employment and shelter which deprive us of basic self-respect, desire to improve and of the means of fending for ourselves. This reinforces our indifference and even destructive passion towards our environment. A fourth and formidable negative factor is the lack of a national policy for domestic or non-commercial fuel which, joining hands with rapid population growth, is driving

The third is our lack of employment and shelter which deprive us of basic self-respect, desire to improve and of the means of fending for

Poverty of human community

It thus stands eminently to reason that if we proceeded to traverse the geographic regions of our country from one end to the other by systematically filling up our matrix of positive and negative endowments as spelled out above, we would find that the incidence of environmental degradation falls progressively heavily precisely on those geographical tracts where the negative factors increasingly reinforce the positive factors we have discussed. In short, environmental degradation will be seen to grow in direct proportion to the poverty of a human community and its natural and economic resource and endowments in a given geographical tract.

One has only to recall the absolute increase in India's population since 1921 to be dramatically aware of the problems that such growth can create. From a mere 251 million in 1921, the population in a matter of 60 years, grew to 685 million in 1981. The absolute growth was two and a half times on the 1921 base. The average density of population per square km. increased from 81 in 1921 to 216 in 1981. In other words, in place of 81 sources of

possible pollution per square km. in 1921, we had as many as 216 of them in 1981. This is the first and weightiest fact to be borne in mind when talking of our environment. The full implications are difficult to encompass.

This statistic of averages, however, conceals more than it reveals of a enormity of what has been happening. First, if you leave out all the waste and uninhabitable land—desert, forest, mountains, riverbeds, marshes, etc.—the average incidence per unit of human settlement of all kinds has perhaps exceeded 400 persons per square km. already.

Secondly, especially since 1946 there have been extensive reshuffling of whole populations and communities among various parts of pre-1947 India, part of which process later came to be interpreted as international migration. These movements disturbed the quantity and quality of populations of a large number of regions quite substantially and still further accentuated inequalities and added to environmental deterioration of the poorer areas by disturbing age-old set livelihoods and therefore ecology. This happened, oddly enough as it may seem, in some sparsely populated areas even more severely than in some of most populous cities.

Poorer areas suffer more

My purpose here is to illustrate how the positive and negative factors that I have spoken of combine to make the poorer economic areas of limited resources and relatively sparse populations more vulnerable in real terms to environmental degradation than even the densely populated industry infested cities, and to argue how the former areas, enjoying apparently low visibility, are threatened even more than the latter where visibility is obviously very high.

It is important at the outset to shed an obvious urban middle class mental block to be able to perceive the worth of my argument. When we go out of a metropolis to a smaller city or a village, we are obviously forcefully struck by the low, even non-existent, air and noise pollution. But few of us land ourselves in the squalors of the very poor and congested settlements of the places we visit or share their lives.

By the same token you will agree there is no pollution in Bleedere or the Zoological Gardens in Calcutta or Chanakyapuri in Delhi or Adyar in Madras where we can live a life-time in complete oblivious of the pollution of Tangra of Calcutta or Sadar Bazar of Delhi or the Cavum of Madras.

Let us deal with metropolitan, industrial and urban pollution first. Compared to any threatened rural area, the resources at the disposal of Bombay or Calcutta, Kanpur or Durgapur, where pollution and degradation enjoy the highest visibility are incomparably larger. What most of the heavily polluted metropolitan and urban areas and their drainage channels and rivers lack is determination, enforcement and organisation of laws and administration that already exist or can be fortified,

The problem of environmental degradation in the cities is still within our power to tackle. None of our cities are even now in any greatly worse state than the British cities as I saw them around 1940. But environmental degradation in the rural and poorer regions of India is rapidly getting intractable because their renewable and non-renewable resources are fast dwindling to the point of no return.

Investigations and surveys

While this goes on apace on the one hand, there has been an explosion in the last thirty years of investigation, systematic recording and faithful mapping of what plagues the country in its various regions and tracts. First must be mentioned the microsurveys, the work of researchers who have brought a new vigour and analytical approach, in contrast to the old synoptic one, aided by the computer, which enables a scholar to look at a problem in a hundred ways.

Second, there has been fresh comprehensive analysis of secondary time series data, like the population, agricultural, livestock, housing, organised and unorganised industry censuses along with the census of manufacturing industries and the annual survey of industry series. Third has been the very imaginatively conceived National Sample Survey, the like of which few countries can boast of.

Fourth has been the various State reports on specific problems and reports of the all-India Industrial and Financial Institutions. I have mentioned only a few sources to illustrate the wealth of material that is available to a policy-maker and administrator concerned with environment.

One may argue that there are scattered and much too comprehensive material to be handled by the lone researcher or at the comprehensive level by any but a very large interdisciplinary team of researchers working with the help of sophisticated computers. In answer to this charge one must immediately mention the various Commission and Committee reports which present material in ideal analytical, taxonomic, yet comprehensive compendium form. Authority therefore, if it wishes to act, cannot very well hide under the excuse of lack of information.

Pressure on land

Much water has flown under the bridges since Karl Marx wrote about the idyllic village community in India's hydraulic civilization, splitting and reproducing itself like an amoeba on virgin or fallow land whenever a community strained its hydraulic resources in the older site. Population has so grown since his time that there is literally no room to turn in India. Not only have all the fallow lands been brought under the tireless plough but even uncultivable, badly eroded or leached land has been upturned, forest cover denuded, river beds sown and choked, the soil made to yield to the point where it can yield no more, its quality irreparably damaged in numerous tracts by the thoughtless use of artificial fertilizers.

The demands of infrastructures and industry again have led, on the one hand, to much interference with natural drainage and to increase in salinity, alkalinity and acidity and consequent increase in malaria and other diseases, and on the other to much deterioration of the soil through mining, criminal felling of forests, indiscriminate quarrying, proliferation of brickfields like ugly potholes throughout the land, and the desecration of urban fringes by rapacious profit seekers and land hungry suburban dwellers.

Rise in population

Both in agriculture and industry the demand that has grown in the last fifty years may be divided into two broad categories, compounding destructive challenges to the environment. The first category centres on demographic growth and the sheer survival of the added numbers. This has led to the most insidious, protean and clandestine forms of environmental degradation of the soil, of misuse and overuse of the water resources, old and freshly created, of subinfeudation to limits that defy all attempts at conservation, because at those levels of subinfeudation, individual minifundia resources are abjectly inadequate to the task.

Every State authority and spokesman talks of land reforms as the panacea, of lending power to the elbow of minifundia cooperatives by way of organisation in raising nurturing and marketing of crops and securing water and regenerating the soil, but does precious little, not only because the problem is extremely tough and demands herculean determination and persistence, but also because the peasantry has been kept in illiteracy and ignorance and therefore debarred from direct access to the new knowledge and technology.

A dishomogeneous process is in operation on the soil and agriculture. Anyone who owns 10 acres or more can now in some measure invest the capital and command the know-how to conserve the soil and get more out of it. Not so with the minifundia, particularly those with less than a hectare, who must tax the soil to the utmost to get the most out of it to cope with the demographic growth of his family. As a result along the same hedgerow as it were in the same village, we find fields with soils well conserved and managed alongside of fields where the top soil is going, going, gone with excessive exploitation.

Apart from the perpetual conflict between the social and economic classes within a village, there is a constant seesaw, relying upon differential demographic growth to maintain numerical majority so vital for physical survival of a group. The other perpetual seesaws are the advantages gained by those with land and the sudden elevation in status and class of those who have received *pattas* of land, however little, and their self-alienation from those still landless who had so long been their allies; the use of power by the rich to the disadvantage of the poor; the changing fortunes of families so as one gains, another loses, often expressed in the exchange of land; the constant struggle for survival by the poor and their determination and energy, in spite of which

they grow differentially poorer and poorer and their land poorer and poorer still.

Demands on forests

Nowhere is this more starkly manifest than in the tribal and forest regions, be they in Assam or Manipur, West Bengal or Bihar, Orissa or Madhya Pradesh, Maharashtra or Karnataka, Himachal Pradesh or Uttarakhand. The demands of population growth on domestic fuel and other essential articles of daily use coupled with the demands of industry and the urban areas for commercial timber, have led not only to ruthless destruction of forests, but grievous soil erosion, landslides, devastating floods, yearly growing in the dimension and extent, desertification and the uprooting of millions of tribal populations.

Several things are simultaneously at work to intensify what for me is the most tragic and irreparable aspect of environmental degradation: greed of governments to reap windfall revenues by felling forests and selling the timber; the rapacity of forest contractors; the demands of domestic fuel and wood pulp based industries which insist on fast growing pulp timbers which are soil denuding in preference to other economic and beneficial varieties, the denial of livelihood by way of forest produce and wild life to tribal populations grievous landslides, leeching, erosion on account of denudation of forest, moss and grass cover; and, finally lack of staying power and tribal populations and their inability to undertake forest regeneration on their own.

Industry and manufacture strike at environment in three ways. First, by the pollution that they directly engender. Secondly, by the congestion and concentration of enterprise of various kinds each one of which generates more pollution, unless taken care of. Thirdly, by leaving scars on the countryside from which their raw materials, whether renewable or non-renewable, are extracted.

A thumbnail sketch

I do not propose here to take you round India as I know it. But it might be pertinent to attempt a thumb-nail sketch of how the positive and negative factors I have spoken of make up West Bengal's problems of ecology and environment. Looking out my little window of the State Land Use Board, I would suggest the following regions in the truncated cosmos of West Bengal. That cosmos somehow reflects roughly what we find in India as a whole.

Starting from the north we have the sub-Himalayan region from 12,000 ft. down to about 400 ft. where we have grave problems of deforestation, landslides, gully and sheet erosion compounded by the problems of a burgeoning population and new types of infrastructure and sudden increase in the demand for domestic fuel.

Below it we have the Terai region running down to the Ganga-Brahmaputra alluvium, with the high Barind thrown in. Here the problem of wide debouching rivers, often changing their courses, plus defore-

station on a large scale, has created problems comparable to those of Gandak and Kosi further west.

On top has been the frightening expansion of urban Siliguri southwards and eastwards, the problems of extensive mining and quarrying, the scarcity of domestic fuel and the need of curing the acid soil with dolomite. It is too early to say how the Teesta Project is going to stabilize the region's ecology.

Then we come to the east of the Bhagirathi from the Padma down to Kalyani where the chief problem is water management and encroachment of human settlements. In each of these regions the problems are densely packed with poverty and illiteracy except in the Siliguri urban tract.

To the west of the Bhagirathi, we have the red laterite area starting from Rajmahal down to as low as Jhargram in Midnapur including almost all of Purulia on the west which has its own problems of poor and illiterate tribal populations being inexorably pushed to the wall, weeping deforestation, along with spawning of minifundia compounded by heavily eroded laterite gullies and ravines.

It is only the Ajay basin of Birbhum, the district of Burdwan, part of Bishnupur sub-division of Bankura and Hooghly and Howrah, north of the Mundeswar which still present a picture of comparative stability and balance, although even these tracts are heavily scarred by brickfields, sand quarries and indiscriminate industrial use. The rest of the district of Howrah, the eastern and southern sub-divisions of Midnapur forming another region again, have heavy problems of salinity, waterlogging, industrial effluents and floods, complicated by encroachments of urban settlements and new industries.

Crossing the Hooghly eastward, while north 24-Paraganas are piling up problems of urban pollution, rise in subsoil water, problems of drainage, brickfields and indiscriminate encroachments of urban settlements, south 24-parganas' problems are still very much as they were about a hundred years ago. They are multiple: saline and flood-prone tracts, the conflicting claims of crop cultivation and fisheries, the onward march of East Calcutta which threatens to swallow the otherwise gold mine of the wetlands, sewage fisheries and truck gardening.

Growth of agriculture

In each of these regions the major problem still is how to secure steady growth of agriculture and agriculture productivity, diversify it with non-seasonal and non-traditional crops that will enrich and optimise the mix of agricultural products, extend knowledge of fertilizer use and water management and support larger populations per unit of soil. The enormity of the problem is underlined by the fact that most of the positive and negative factors that I have mentioned have very high incidences in our state and the problem is getting worse than better. I shall mention only one symptom of this deterioration which will speak for the rest. The proportion of land under forests to West Bengal's total surface area was around

12 per cent twenty years ago. The latest satellite images suggest it has shrunk to a little over seven per cent in 1983.

Perhaps because environmental degradation is the newest boy to be officially recognised in the list of global concerns, enthusiastic scientists, management specialists, engineers armed with their respective technologies have eagerly seized upon it as their monopoly. What I am at pains to plead is that it would be idle to imagine that they alone can lick the problem although one must hasten to add that they will surely be the most visible actors in the field. But if I have succeeded in bringing out the relevance and importance of my positive and negative factors, there will be little difficulty in realising that much more is involved than management, science, engineering or technology.

Demographic growth of development

Environmental degradation is at the very centre of interaction between demographic growth and economic development, between man and what he consumes and produces; because whatever contributes to greater production and productivity and distribution has an inbuilt negative aspect of environmental degradation to it. These aspects can be taken care of only when the positive and negative factors I have mentioned are tackled simultaneously with the utmost circumspection.

Interest in environment and effective conservation—as opposed to the present thoughtless, unconscious apathy, even deliberate hostility to it—can grow only when a certain measure of education and well-being and equity in distribution and consumption have been achieved, gross regional imbalance removed and people, particularly in the more economically backward areas, are enabled to nurture the right kind of hope for the future—the hope of having a share and stake in environmental conservation. To the vast bulk of our illiterate population, especially those below the poverty line, all hope is still but hope of the wrong thing and therefore ruefully shunned.

The problem of environment is again compounded by the ever increasing pace of rural to urban, urban to urban, and rural to rural migration, both short and long term. This problem is even more accentuated by the vast scale of very short duration, seasonal migrations especially to the slums of the city and their cyclical concentration in those districts which are among the most poorly endowed by way of natural and land resources and easily account for more than a third of the entire land space of India.

Nowhere is the evil conjunction of the positive and negative factors more visible in all its fury than in the extensive forest-cum-tribal population tracts, whether on the plains or in the hills, where the lack of a national non-commercial domestic fuel policy, coupled with the demands of cultivation, industry, housing and population growth, has led to extremes of environmental degradation and regional poverty through denudation of forest cover.

It is no difficult matter to make out how, without a much more literate population and a palpable measure of equity in consumption and employment, distributive justice and access to social welfare and security and removal of regional disparities, demographic growth itself—one of the prime reasons of environmental degradation—can be halted at an acceptable limit. And unless demographic growth is contained, environmental control is bound to prove a longer and more dubious haul than it does now.

The burden of my song, as can be guessed, is simple enough. Just as the growth of population can not be checked by prescription, enforcement, contraceptive technology or extension alone, but only when people are brought up well enough to want fewer children and seek steps themselves to attain their desire, in the same way, environmental degradation cannot be checked by prescription, technology or management alone but by people being helped to appreciate through various improvements in the level of living and employment, to want to conserve their non-renewable resources and promote their renewable resources. This, I feel, can come only when the negative factors I have discussed are reasonably obliterated and the positive factors are coordinated towards a proper goal. □

Vijayanagar and Daitari Steel Plants

THE UNION GOVERNMENT has decided to commence the erection of steel plants in Vijayanagar and Daitari in the Seventh Plan. A great deal of preparatory work for the erection of the two plants has been already done.

Efforts will be made to ensure that the Detailed Project Report for Vijayanagar Steel Plant is ready within 3 months and for Daitari in about 6 months.

A thorough review of the technology has been carried out based on the availability of raw materials of the requisite quality and the technology of direct reduction (with the use of non-coking coal) combined with high efficiency are furnace. Continuous casting has been established as the most cost-effective and therefore this technology has been selected. It will enable the production of iron and steel of high quality.

For Daitari, the site has already been selected and notifications for the acquisition of land have been also issued by the Government of Orissa. Soil investigations have been completed—as also studies of availability of water.

The plants will be erected in modules so that they can keep pace with the rate of growth of demand. The first phase (which includes the development of raw materials, transportation facilities and captive power) envisages an expenditure of about Rs. 400 crores in the Seventh Plan. Both the plants are being so designed that they can continue to be expanded as required to meet the demand. □

Employment strategy for the Seventh Plan

N. P. Singh

With the increase in population, about five to six million people are entering the employment market every year. How could this growing problem be tackled? In this article, the author has examined the technologies which could help the investment policies that would be appropriate, and identified areas that have the employment generation potential.

AS AT THE END OF 1983-84, there was an estimated backlog of about 20 million unemployed persons in the country; atleast 5 to 6 million people were being added on to the employment market each year; and the organised (including Small Scale Industry) Sector of Industry was hardly in a position to absorb about 1.0 to 1.2 million persons a year. From these basic figures, it could be seen that the unemployment situation in the country, is indeed grave and calls for immediate attention for our planners and policy-makers.

The main choices available to us for alleviating this situation appear to be (a) to plan for a substantial increase in employment in the primary sector viz. agriculture and rural development, as the bulk of the unemployed persons reside in the rural areas; (b) to increase employment opportunities in the tertiary sector e.g., services trade and banking, etc., where the additional investment required to create new work-places is comparatively low, and (c) to encourage the use of employment intensive technologies in selected sectors of the economy, specially

The views expressed in this article are those of the author and do not necessarily represent the views of the organisation to which he belongs.

in the case of agro-based, small scale, handlooms, handicrafts and cottage industry.

Choice of technology

There are apparent conflicts/trade-offs among the objectives of maximisation of growth-rate, output and employment in a developing country. Now that the Approach to the Seventh Five Year Plan clearly emphasises the maximisation of employment as a dominant goal of the Plan, it is clear that in any case of conflict arising from the choice of techniques (to fulfil a specified production goal) between the objective of maximisation of employment on the one hand and that of maximisation of re-investible surplus (and thereby of the growth rate) on the other, a technology which leads to the creation of greater employment opportunities (both direct and indirect) for a given investment ought to be preferred, unless there are exceptional circumstances warranting a departure from this rule.

And here, the choice may not merely be between an indigenous technology on the one hand and an imported technology on the other, but it could also be between several competing imported technologies or indigenous technologies themselves. The question of choice could also pertain to futuristic technologies, i.e., those which could be developed or acquired by the country from outside, for the future.

Investment cost

The investment cost required to create an additional job varies from one sector of the economy to another and, within the same sector, it varies according to technology employed—whether capital-intensive or labour-intensive, etc.

The incremental employment-capital ratios for different sectors of the economy as extracted from 'A Technical Note on the Sixth Plan of India, (1980-85)' are re-produced in Table I. It will be seen that the employment—investment ratio (in terms of person years per million rupees) varies from 0.024 in the Real Estate business to 115.625 in the construction sector, with the ratios for agriculture and manufacturing sectors being at 44.73 and 12.62 respectively. The estimated average incremental employment-capital ratio for the entire economy over the Sixth Plan Period is worked out to be 21.599 person years per million rupees. In other words, the average capital cost per work place for the economy as a whole over the Sixth Plan Period amounts roughly to Rs. 50,000 per person.

Prof. P. K. Bose in his paper entitled 'Dimensions of Unemployment, Science and Technology' has estimated the employment-investment ratios for 12 groups of industries. His data is reproduced in Table II. According to Bose's calculations, the employment generated per Rs. one lakh investment (employment co-efficient) varies from 0.3 in the fertilizer industry to 9.5 for the electronics industry. Employment co-efficients for industries like agricultural implements (5.0), commercial vehicles (5.2), heavy electrical equipments (5.2), tractors (5.4) and storage batteries (6.1) fall in the intermediate categories.

It will be seen that, contrary to popular impressions, heavy engineering industries like manufacture of commercial vehicles, tractors and heavy electrical equipment, etc. are relatively more employment-intensive than other industries like fertilizers, paper, automobile tyres and tubes and cement.

What is mentioned above refers only to the estimates of capital cost per work-place with reference to the direct employment opportunities created in the sectors in which the investments are made. No precise estimates are available of the indirect employment effects of such investments. However, in so far as a given sub-sector of industry (such as cement or sugar or fertilizer, etc.) is concerned, while the direct employment per unit of investment in an industrial unit would doubtlessly vary depending upon the plant size and the nature of technology employed, the down-stream indirect employment in associated sectors like transport, storage and wholesale/retail trade is not likely to vary significantly from one unit's product to another.

Likewise, the up-stream indirect employment may also not differ substantially from one unit in a given sub-sector of industry to another, as long as the unit-size and the input requirements remain the same, irrespective of the technology employed. It would, however, appear that engineering industries which procure some of their components from ancillary or other units are sure to generate more of up-stream indirect employment than other units in the same or other sectors.

An obvious word of caution, however, appears to be necessary at this stage. While deciding issues like sectoral allocation of investments in the light of the goal of employment generation, it is not as though

all the investment could go into sectors which are the most employment-intensive. The need for balanced sectoral development with reference to factors like internal demand, export requirements and inter-relationships among different sectors has necessarily to be kept in view.

Strategy for employment maximisation

Against the above background, it may be worthwhile for the Government to consider the following suggestions and strategies for moving towards the goal of employment maximisation during the 7th Plan Period :

It is possible to argue that even in a capital-scarce/labour-abundant economy like that of India, one should still deploy the most advanced and cost-effective technologies regardless of their direct employment benefits in areas like : (a) infrastructure development e.g. irrigation, power, transport and communication; (b) export promotion; and (c) defence, atomic energy, health or others involving the security of the nation or alleviation of human sufferings or hazardous/unduly arduous conditions of work, etc.

However, the technologies to be employed at least in the rest of the sectors should be those which maximise direct employment (and also, if possible, production) per unit of investment rather than those that just aim at the maximisation of profits. If this argument is accepted, a deliberate bias in favour of labour-intensive technologies in selected sectors of the economy would need to be built into our licensing, fiscal and other policies.

As suggested above, developing countries having a comparative shortage of capital and abundance of labour should aim at evolving and adopting technologies which help in the maximisation of production as well as employment for a given investment rather than those that just aim at the maximisation of profits. Example of sugar industry where the adoption of the mini-sugar plant (open-pan sulphitation process) technology in contrast to the vacuum-pan sulphitation process adopted by large-scale, modern sugar mills leads to much greater employment as well as production per unit of investment, is a case in point.

However, in economies dominated by private enterprise, only those technologies are likely to be ultimately adopted that lead to the maximisation of profits per unit of investment. It would, therefore, be necessary for the concerned Governments to take steps to overcome this apparent conflict of interests. This could be achieved by correcting the 'factor-price distortions' in the economy, i.e., by the adoption of fiscal policies which would help increase the profitability of the labour-intensive techniques above that of the more capital-intensive ones.

Capital-intensive process

Given the freedom of choice and necessary capital, most entrepreneurs would prefer to deploy costlier machines than employ more workers (i.e. prefer

capital-intensive processes to more labour-intensive ones), not only for reasons of profitability (in a distorted factor-price situation) but also because (i) machine management appears to be inherently simpler than men management and (ii) the problems of labour management seem to grow more and more acute with the increase in the number of workers employed under one roof.

This tendency would need to be countered, if the utilisation of 'appropriate' technologies is to be promoted seriously. For this purpose, the Government will need to re-orient its credit, licensing, wage and labour management policies suitably, so that they not only prefer the establishment of smaller industrial units or units based on 'appropriate' technologies but also keep the demands for premature wage increases effectively under check.

The setting up of large-scale/heavy industries in backward areas has not generally helped in solving the problems of poverty or unemployment in those areas. Efforts should, therefore, be made to encourage the setting up of industries based on small-scale, intermediate technologies for such areas, specially those which seek to utilise raw materials, skills and labour locally available in these areas.

An 'Employment subsidy scheme' (in place of the 'Capital subsidy scheme' now in vogue) could be introduced to encourage the industrial development of backward areas. As an alternative to the substitution of the Capital subsidy scheme by an employment subsidy scheme, a modification of the existing scheme by weighting the amount of the Capital subsidies admissible to eligible units in accordance with the ratio of their Output-Capital ratios to the estimated output-capital ratio for the entire economy could not be considered.

The setting up of new industries based on technologies which are not considered appropriate to the country's socio-economic and environmental conditions needs to be consciously discouraged through a careful scrutiny of all technologies (whether imported or indigenous) from the viewpoint of their "appropriateness" at the industrial licensing stage. The expansion programmes of the existing industries should also be subjected to a similar test before their approval. A Government department or organisation possessing adequate competence to do so ought to be designated as the nodal agency to render necessary advice to the Industrial Licensing Authorities.

Another strategy that might deserve possible examination in the context of the Seventh Plan would be to have a deliberate policy of not increasing the indigenous production of goods in selected capital-intensive sectors of the economy, except those falling in strategic areas like infrastructural development, food and food inputs, defence drugs and medicines, etc. (and to meet the additional requirements in these sectors through imports), but to maximise the production of goods and services in the more labour-intensive sectors and earn the needed foreign ex-

change through increase in the exports of the goods and services produced.

Liberal imports

During the Sixth Plan Period, the country appears to have thrown its gates wide open for import of capital goods and other materials from outside whether or not such goods or materials are available within the country. This is understood to have been done with the primary objective of encouraging competitiveness through import of goods among Indian industries, so that our industries are compelled to take steps to modernise themselves and upgrade their technologies.

However, nothing substantial appears to have been done to compel the Indian industry, hitherto enjoying a sheltered market, to put in significantly higher investments in research and development as required, with the result that the desired upgrading of technology and modernisation of the Indian industry can be achieved only through massive imports of technology and, in turn, of associated capital goods. Thus, at least in the short run, the country stands to face grimmer prospects in its balance of payments situation, while at the same time, the more inefficient units in the country which are unable to modernise themselves or negotiate imports of technology successfully may get wiped off from the industrial scene completely.

Encouraging innovation

As an alternative to the present approach of creating a competitive environment in the Indian industrial scene through liberal imports under open general licence (OGL) a policy for creating a similar competition through deliberate but marginal over-licensing of production within the country might, therefore, deserve serious examination. It would not be unreasonable to expect that such a modified policy could itself encourage the process of innovation and modernisation on the part of the Indian industry and, further, through fall in prices based on the principle of demand and supply, it could also lead to more savings in the hands of the consumers, which, in turn, could be re-canalised through the Banking system for investment and further growth by following appropriate fiscal and monetary policies.

It is well understood that import of goods from other countries amounts to the provision of employment to the labour force in those countries at the cost of the native country's economy. While such import in certain sectors cannot be altogether avoided, special incentives would nonetheless appear to be necessary for encouraging import-substitution activities in our country during the Seventh Plan.

It would also be worthwhile to remember that import of technology is, in any case, preferable to the import of goods, since the former would, at least, encourage local production based on a minimum outflow of foreign exchange from the country. It may, therefore, be desirable to follow a policy of liberalised import of technology in respect of the manufacture of

such goods as are being freely allowed to be imported into the country currently. Such liberal imports of technology need not, however, be permitted under OGL; it should suffice if the clearance mechanisms in respect of imports of know-how in such cases could be simplified. The list of goods allowed to be imported under OGI, would also need to be reviewed and curtailed from time to time.

The Economic Administration Reforms Commission (EARC) has recommended concessional tax treatment for the small-scale sector of industry, which generally yields higher production and greater employment per unit of investment in comparison with the medium/large-scale sector. EARC's suggestions in this regard would seem to deserve careful consideration on the part of the Government.

Employment generating activities

As mentioned earlier a major part of population and hence of the unemployed labour force resides in rural areas and, therefore, most of the additional jobs need to be created in the agricultural sector and in agriculture-related activities including agro-based, tiny and cottage industries and rural development. As production should match the demand, the felt needs of our rural areas in sectors related to basic human needs, viz., food, clothing, housing, medicines and education as well as in other fields like rural sanitation, water supply, entertainment and infrastructural requirements, etc. need to be identified in considerable detail and the setting up of industries and other economic activities in the rural areas has to be planned carefully to match these needs.

As a corollary to the above, one of the important sectors deserving considerable emphasis and also close monitoring to ensure early completion of all on-going as well as new projects would be the irrigation sector. It is well known that the provision of irrigation facilities—whether major, medium, or minor—considerably helps in improving the productivity of land not only through multiple cropping, but also by improving the per-acre yields of the existing crops themselves through additional inputs like improved seeds, fertilizers and insecticides, etc. Fuller exploitation of the existing irrigation facilities through proper command area development and the provision of new ones at a faster pace would thus considerably enhance productive employment in the agricultural sector.

Further, the setting up of small-scale, tiny and, cottage industries, largely agro-based and utilising the locally available skills and other resources and catering to the felt needs of the people, in our rural areas, would also help in improving the income levels of the rural population as well as their quality of life, specially in the case of marginal farmers and landless labourers, who could be preferentially employed in such industries and thereby ease the pressure on land to some extent.

Lastly, keeping in view the fact that a majority of our farm-holdings are small and marginal, the development of small-farm technology specially suited to the needs of this group of farmers and promotion of

subsidiary occupations like poultry-farming and fish-culture among them would also seem to require special emphasis.

Infrastructural sector

The sector next only in importance to Agriculture and irrigation is the infrastructural sector including Energy, Transport and Communications. Out of the aforesaid sectors, the area of energy is, perhaps, the most important, since energy is basic to all modern production activity and the provision of other services like transport, etc. in the economy. Acute and recurring shortages of power felt almost all over the country, barring in a few pockets, over the last several years have already led to the focusing of the attention of our planners on the need for putting in greater investments in the power sector and for more efficient and timely implementation of the on-going and new projects in this area.

Likewise, with the growing pressures of our population on the country's transport facilities, both urban and rural, the transport sector also deserves much greater emphasis and attention. Any additional investments in the energy and transport sectors are bound to have considerable multiplier effects and, therefore, lead to the generation of significant amount of additional indirect as well as direct employment.

The communication sector, although not highly employment-intensive by itself, is also, nonetheless, basic to the needs of a developing and expanding economy. With the technological revolution currently taking place in the industrially advanced countries in the field of Communication technology, we may find it difficult to cut down the minimum essential investment needed in this sector in order to keep pace with the on-going developments in this field in the advanced countries and also to cater to the country's expanding requirements.

Construction industry

Yet another sector of considerable importance is the area of construction industry. As could be seen from Table I, the construction sector with an employment-investment ratio of 115 person years per million rupees is the most employment-intensive sector in the entire economy. When we look at the acute housing problem in our urban as well as rural areas on the one hand and the need for generation of additional employment opportunities on the other, there seems to be no reason to deny a special thrust to the construction industry in the Seventh Plan period.

There are many steps which the Government could consider for this purpose. For instance : the construction business in-so-far as it relates to the building of dwelling houses catering to the needs of the middle and lower income groups and EWS should be treated on a par with other priority sectors like small-scale industries and agriculture in the matter of provision of finance and charging of interest rates; secondly, the tenancy laws which strongly discourage private investment in the construction of dwelling houses for purposes of letting should be suitably amended.

In fact, the housing problem in the country, specially in its urban areas, is so serious that even a more drastic step for solving it, e.g., permitting investment of money from any sources in the construction of dwelling houses (not exceeding a specified size and other standards) without asking investors to account for the sources of such money could also be considered for a limited period of, say, three to five years. It would not be unreasonable to expect that this step would help in channelising the use of black money, which otherwise plays havoc with the economy, into a socially useful direction and contribute significantly towards the solution of the acute housing problem in the country.

Manufacturing sector

Coming to the manufacturing sector, it would be noticed from Tables I & II that while the employment-investment ratio in this sector as a whole amounts to 12.6 person years per million rupees (or roughly an investment of Rs. 80,000 for every new job created), the sub-sectors which account for the greatest employment-intensity are 'electronics' and 'engineering industries' (both heavy and light). Besides, the small-scale sector, as such, is considerably more employment-intensive than the medium and large scale industries and the tiny sector is more employment-intensive than the rest of the sub-sectors of the manufacturing sector. The direction of emphasis, both for purposes of choice of technology and the additional investment required in the manufacturing sector is, therefore, clear. In case we seriously desire to fulfil our goal of maximising employment generation during the Seventh Plan, technologies suited to the requirements of small-scale and tiny industries, specially those in the Electronics and Engineering sectors, would deserve considerable emphasis.

The illustrative list of employment generating activities so far discussed has not covered sectors like services, trading and banking insurance and other areas like maintenance services and various other self-employment activities. These activities also have a very great potential for employment generation and need to be encouraged suitably. Out of these, the activity relating to the maintenance of various types of machinery and equipments used in fields like agriculture, health, industry, administration, consumer

durables, etc. is one where the generation of fresh employment opportunities is linked with the need for the creation of new training facilities, in view of the shortage of skilled hands in the country to take up such work. The Department of Science and Technology and the Ministries of Education and Labour would, perhaps, do well to devote careful thought in this direction.

Influencing the demand

We have so far confined our attention only to the 'supply' side of jobs and said nothing about how to influence its 'demand' side, both in terms of the demand pattern and the quantum of such demand. The 'demand pattern' for the jobs can be influenced through the types and level of education imparted to the people and in particular, by introducing appropriate vocational streams in our educational curricula. Unfortunately, due to the somewhat disorganised, if not half-hearted, efforts made in the past and also lack of co-ordination among the various agencies involved in this field at the State level, the scheme of vocationalisation of education attempted thus far can hardly be described as a success. The Ministries of Education and Labour and the Planning Commission as well as all other Government Departments and Agencies concerned with Educational man-power planning, both at the Centre and in the States must, therefore, devote considerable thinking in this direction, with a view to seeing that the educated man-power supply in the country matches its demand in various sectors, as far as possible.

Lastly, as regards the 'quantum' of demand for the jobs, the only way to influence it downwards would be to accelerate the implementation of family welfare programme. We could also think in terms of either guaranteeing or, at least, according a preferential treatment in the matter of provision of employment (either Government or private), to at least one member each of the families of those who voluntarily accept a 'terminal' method of family welfare as a means of limiting the size of their families after two or lesser number of children. These steps, it is expected, would go a long way in reducing the 'demand' for jobs in the long-term perspective (although, obviously, not during the Seventh Plan Period) in the country.

TABLE I
Incremental Employment-Capital Ratios for different sectors

Sl. No.	Sector	Employment		Investment	Employment Investment ratio (person years per million rupees)
		(in million standard 1979-80	person years) 1984-85	(in Rs. crores) 1980 to 1985	
		2	3	4	5
1.	Agriculture	80.331	95.251	29982	44.730
2.	Mining & Quarrying	0.724	0.894	6575	2.585
3.	Manufacturing	22.012	27.758	45515	12.626
4.	Construction	9.286	11.321	1760	115.625
5.	Elec., gas and water supply	0.723	0.927	23554	0.866

(1)	(2)	(3)	(4)	(5)
6. Railways	1.662	1 704	4724	0.889
7. Other transport	7.109	8.677	11330	13.839
8. Communication	0.800	0 917	2902	4.031
9. Trade, storage and warehousing	13.278	116.640	7299	16.061
10. Banking and insurance	1 038	1 225	260	77.927
11. Real estate and ownership of dwell.	0.028	0 032	16437	0.24
12. Public Admn., Defence and other services	14 119	16 042	4886	39.357
13. Investment in IRDP and NREP	00 000	4 000	3886	11 5
TOTAL	551 11	1185 39	158710	21.599

Source : Technical Note on The Sixth Plan of India (1980-85).

TABLE II
Investment in various industries with employment generation

Sl. No.	Industry	Data from total number of firms	Total employment	Investment in machinery (in lakhs)	Employment coefficient (1 employment per Rs. 1 lakh investment)
(1)		(2)	(3)	(4)	(5)
1.	Cement	7	7,675	3,676.34	2.1
2.	Automobile tyres and tubes	2	3,720	2,617.00	1.4
3.	Fertilizers	22	4,405	15,850.00	0.3
4.	Tractors	1	1,140	213.00	5.4
5.	Heavy electrical equipment	1	52,000	10,000.00	5.2
6.	Storage batteries	1	1,610	284.00	6.1
7.	Machine tools	All	45,000	11,000.00	4.1
8.	Commercial vehicles	2	12,030	2,795.00	5.2
9.	Dry cells	3	900	195.00	4.6
10.	Paper and paper boards	1	3,500	6,000.00	0.6
11.	Agricultural implements	All	2,000	400.00	5.0
12.	Electronics	3	4,640	488.42	9.5

*Extract from Table 1 of Appendix 4 Dimensions of Unemployment, Science & Technology by Prof. P.K. Bose in the 'Report of the Committee on Scientific and Technical Manpower (Nov. 81) Govt. of India, Dept. of Science & Technology.

Fourth Oil Berth at Bombay

THE FOURTH OIL BERTH at the Butcher Island Oil Terminal at Bombay was commissioned recently. It adds a new dimension to the crude oil handling capacity of the port, increasing it by some 50 per cent with an additional throughput of 8.5 million tonnes of crude.

The fourth berth has capacity to handle tankers upto 80,000 dw. tons with a maximum loaded draft of 12.7 m. and is designed with an in-built capacity to take tankers upto 125,000 dw. tons drawing water upto 15m. with suitable additional deepening of the main harbour channel.

The planning designing and supervision of construction of the project costing Rs. 38.79 crores were done entirely by the BPT engineers while the civil engineering works of the berth construction and its approach were carried out by the National Buildings Construction Corporation (NBCC) with the assistance of foreign firm. The fourth oil berth would generate annually about Rs. 500 crores by way of savings and earnings of foreign exchange. □

Progress of IRDR

THE TOTAL INVESTMENT in the first four years of the Sixth Five Year Plan on various schemes under the Integrated Rural Development Programme has touched the figure of Rs. 3433.10 crores.

The per capita investment has also risen from Rs. 3107 in 1982-83 to Rs. 3201 in 1983-84.

The term credit mobilisation has also shown considerable improvement from Rs. 713.98 crores in 1982-83 to Rs. 773.51 crores in 1983-84. The total credit mobilised so far in the first four years of the Plan comes to about Rs. 2244.13 crores. The percentage of utilisation to total allocation has also shown a significant increase from 89.70 per cent in 1982-83 to 99.69 per cent in 1983-84. □

Growth sans justice

S.R. Chirmade

Analysing the traditional and the modern approach to economic development, the author says that inequalities are widening even with perceptible growth in main sectors of the economy. The situation could, however, be improved with the greater integration of the poor into the income generation process and the creation of new productive assets or through redistribution of the existing incomes and assets, he adds.

THE GOAL OF ECONOMIC PLANNING as the Indian planning and policy makers envisage it, is to establish an egalitarian and prosperous society. Economic development till recently emphasised a rapid rate of growth of the national product to attain this objective. But now there has emerged a school of thought which proceeds on the basis that there is an inherent conflict between the requirements of development and the needs of social justice.

According to the traditional approach of growth, the development objective is linked to production in aggregate as well as in per capita terms, and its rate of change over time; and the investment planning has to ensure that the limited resources are channelized into the most productive lines to generate enough surplus for saving and reinvestment.

It is assumed that once growth takes place, its trickle effect will benefit the people in the low income groups and its spread effect will activate different sectors of the economy. The traditional approach to growth stipulated that efforts to promote social justice through reduction in income inequalities

would eventually slow down the rate of growth and income generation.

Insignificant impact

The experience in the Third World countries however has shown that growth by itself does not lead to amelioration of poverty. Studies on process of economic development in several developing countries where satisfactory rates of growth of economy have been achieved during the recent past bear out that growth has not always been able to make any significant impact on employment and poverty; and that unemployment, inequalities and poverty conditions are assuming serious dimensions in the developing countries.

Many third world countries which had achieved relatively high rates of economic growth by historical standards in 1960s began to realize that such growth had brought few significant benefits to their poor. In Africa, Asia, Middle East and Latin America, levels of living seemed to stagnate and in real term even declined.

Indian experience

In India also while there has been growth in the economy since planned development started, it has hardly any effect on the problem of unemployment and poverty. Growth both industrial and agricultural is confined to certain classes of people and certain parts of the country aggravating thereby income and assets inequalities and regional imbalances.

It has been acknowledged that a high rate of growth is not a substitute for deliberate and effective policies to ensure equitable distribution of the gains of development. In the absence of such policies the process of economic development makes the rich far too rich before the poor can secure the bare minimum, and also widens the gulf between the rich and the poor intolerably and inevitably undermines the democratic foundations of the economy.

Current thinking

Current thinking as initiated by World Bank experts and other economists has altered the approach to development planning. A high growth rate is a necessary but not sufficient condition to ensure employment generation and income distribution in favour of masses and reduction of mass poverty. Growth has to be linked to ultimate goal of planning. Since the creation of an egalitarian society is the aim of planning the aspect of income distribution in the growth process cannot be divorced from the production aspect.

Recent evidence confirms that in early stages of development the distribution of income tends to become more concentrated. Increases in output come disproportionately from relatively small modern sectors with huge investment and have relatively high rates of growth. This pattern of concentrated growth is perpetuated by limited access to land, capital, education and even modern sector employment; and is often reinforced—unintentionally or otherwise by Government's fiscal and trade policies.

As growth continues its benefits do not percolate to the masses due to certain obstacles. The rapid growth of population in the third world countries has led to an excess supply of unskilled labour. Since they cannot be absorbed in wage employment in organized sector, the bulk of the poor are self-employed small farmers, rural artisans and members of the rapidly growing urban informal sector.

For these poverty groups income growth is limited by lack of access to land, capital and other public facilities often by outright discrimination and distorted implementation of seemingly egalitarian policies of the Government. In some countries access to modern sector employment has been improved through education and the rapid growth of demand for labour, while in some others land has been redistributed and public investment redirected to offset the initial disadvantages of the poor. A few developing countries in which the poor have shared equitably in income growth are Israel, Yugoslavia, Taiwan, Korea, Sri Lanka, Costa Rica, Tanzania etc.

Justification of economic inequalities

The basic economic argument to a large income inequalities was that high personal and corporate incomes were necessarily saved which made possible investment and economic growth through such mechanism as Horrod-Domer model. If the rich save and invest significant portions of their income productively while the poor spend all their income on consumption goods and if gross national product rates are directly related to the proportion of the national income which is saved, then apparently an economy characterized by highly unequal distribution of income would save more and grow faster than one with a mass equitable distribution of income.

Eventually it is assumed that national and per capita incomes would be high enough to make

possible sizable redistributions of income through tax and subsidy programmes. But until such time reached, any attempt to redistribute incomes significantly would only serve to lower growth rates and delay the time when a larger income pie could be cut up into bigger slices for all population groups.

The other view

There are certain reasons why many development economists now believe that the traditional argument pertaining to the relation of saving as arising from personal and corporate entity and the levels of economic growth as incorrect and therefore the necessity of equality in developing countries aspiring for self-sustaining economic growth.

First, the common impression supported by wealth of recent empirical data bears witness to the fact that unlike the historical experience of developed countries, the rich in the contemporary third world countries are not noted for their frugality nor for their desire to save and invest substantial portions of their incomes in their respective economy. Instead, landlord, progressive farmers, the newly coming-up farmers, businessmen, politicians and other rich elite are known to squander much of their incomes on imported luxuries goods, expenses on residential houses, lavishly furnished guestrooms in business and factory premises, foreign travel and investment in gold, jewellery, marriage, other family ceremonies etc. Such savings and investment do not add to nations productive resources. In fact they represent substantial drains on these resources in that the income so derived is extracted from the sweat and toil of the common uneducated, unassuming and unskilled labourers.

Unaccounted income

Moreover, unaccounted income is earned not only by businessmen, traders, doctors, lawyers, engineers and persons with powers but also by some middle class persons in government, or semi-government services and other persons such as dowry recipients and teachers with tuition income. Thus people with unaccounted incomes are found to over indulge in pleasures on a perennial basis in accumulating almost-endlessly for their progeny, and in wielding their money powers in social, political, governmental and religious spheres to their own advantage.

The rate of capital formation is higher in developed countries than that in low income countries. This can be illustrated statistically. Mr. S. B. Mehta, an economic analyst, pointed out that savings in India as spread on accounted and unaccounted incomes (in parallel economy) comes only to 13 per cent for the year 1978-79 instead of 22 per cent as it was officially enumerated.

The life of leisure classes under the open class system exerts a strong influence on business orientation and on the kind of business activity followed in a community. A preference for short term commercial operations or for speculative enterprises rather than long term industrial undertaking is in

fact known to be common in many underdeveloped countries.

Structural changes

The structural changes in Indian economy have not taken desired direction as the share of the tertiary sector in the net product has been steadily increasing from 30.2 per cent in 1970-71 to 37.2 per cent in 1981-82 (from 30.2 per cent to 36.9 per cent at constant prices).

Second, the low incomes and the low levels of living for the poor which are manifested in poor health, nutrition and education lower their economic productivity and thereby lead directly or indirectly to slower growing economy. The poorest 20 per cent population in India gets only 8 per cent, the poorest 60 per cent receive 30 per cent, the middle 40-60 per cent receive 16 per cent, the highest 5 per cent receive 20 per cent and highest 20 per cent receive 42 per cent of the national income. Strategies to raise the incomes and levels of living of bottom 40 per cent or so would therefore contribute not only to their material welfare but also to the productivity and income of the economy as a whole.

Thirdly, raising the income levels of the poor will stimulate an over all increase in the demand for locally produced necessity products like food and clothing. On the other hand rich spend their income, on luxury goods mostly imported. Thus raising demand for local goods provides a greater stimulus to local production, local employment and local investment. It will certainly create conditions for rapid economic growth and a broader popular participation in the process of development.

Fourthly, a more equitable distribution of income, adhered to through the reduction of mass poverty can stimulate healthy economic expansion by acting as a powerful material and psychological incentive to wide spread public participation in the development process. On the other hand, widespread income inequalities and substantial absolute poverty can act as a powerful material and psychological disincentive to economic progress.

Fifthly, Article 38 in the Constitution of India provides that the State shall strive to promote the welfare of the people by securing and protecting as efficiently as it may a social order in which justice, social, economic and political, shall inform all the institutions of national life. The State shall in particular strive to minimize the inequalities in income and endeavour to eliminate inequalities in status, facilities and opportunities not only amongst individuals but also amongst groups of people residing in different areas; and engaged in different vocations.

Article 39 also states that the State shall direct its policy towards securing that the citizens, men and women equally, have the right to an adequate means of livelihood, that the ownership and control of the material resources of the community are so distributed as best to subserve the common good and that the operation of the economic system does

not result in the concentration of wealth and means of production to the common detriment. The contents of these articles indicate that one main objective of the Constitution is for a welfare state and an egalitarian social order.

Thus, Sixth Five Year Plan (1980-85) also incorporates that it will not be realistic to rely solely on the growth process to find solution to the problem of poverty and that specific policy measures would be needed to ensure social justice as improvement in living standards of the poorest groups, and reduction in inequalities in assets and distributions.

Sixthly, exclusive reliance on the natural forces of economic growth to reduce significantly the extent of absolute poverty in most developing countries appear to be insufficient. Professor Kuznets has done a pioneering analysis of the historical growth patterns of the contemporary developed countries. He has suggested that in the early stages of economic growth the distribution of income will tend to worsen while at the later stages it will improve.

However our inequalities are widening even with perceptible growth in main sector of the economy as agriculture and Industry during the last twenty-five years. It should be noted that it is the character of the economic growth i.e. how it is achieved, who participates in the process, which sectors are given priorities, that determines the degree to which growth is or is not reflected in improved living standard of the poor.

In an empirical study carried by J.A. Adelman, G.T. Morns and John Hopkins, for forty-three developing countries pertaining to the relationship between shares of income accruing to the poorest 60 per cent of the population on one hand and country's aggregate performance on the other was analysed and it was found that both relative and absolute income share of the 60 per cent of the population has been decreasing on the average.

Myth of Kuznetic hypothesis

The "Kuznets Hypothesis" that in the early stage of economic growth, the distribution of income will tend to worsen and that in the later period it would improve may not hold true in the developing countries. Because in the early dynamic phase of capitalism when the present developed countries achieved development, inequalities in income and wealth were functional to economic growth. In that phase the rich class put a premium on saving and investment. As Keynes wrote, "The new rich in the nineteenth century were not brought up to the large expenditures, and they preferred the power which investment gave them to the pleasure of immediate consumption. Like bees they saved. Thus because of the puritanical consumption habits of the rich class in the early stages of capitalism, the inequalities in income distribution promoted growth. But the later phase of capitalism has a structural difference from the earlier phase.

Prof. A.K. Das Gupta has stated that modern capitalist knows how to spend and what to spend on.

Far from being the puritan that his ancestors used to be he now indulges in conspicuous consumption. In modern phase of capitalism, inequalities in distribution of income between capitalists and labourers is matched by a conspicuous inequality in the distribution of consumption between them. Moreover these inequalities are sustained and enhanced by inequality of distribution of power. The rich and newly emerging rich intermediate class which enjoys luxury consumptions dictates what to produce and how much. Hence there is a premium on production and marketing of luxury goods and a discount on the production and distribution of consumption goods.

In a society where mode of production is class exploitative and class divisible, the State even if it functions under the framework of political democracy is not a class neutral agent, and its actions are determined by its class character, the class which controls the state power.

Seventhly, Thorstein Veblen, who occupies a place in the line of makers of the modern world, in his book "The Theory of Leisure Class" sarcastically states that in modern communities, where the dominant economic and legal feature of the community's life is the institution of private property, one of the salient features of the code of morals is the sacredness of property. A thief or swindler who has gained great wealth by his delinquency has a better chance than the small thief of escaping the rigorous penalty of the law, and some good repute accrues to him from his increased wealth and from his spending the irregularly acquired possession in a seemly manner. There is an inclination to condone an offense against property in case of man whose motive is the worthy one of providing the means of decent manner of life for his wife and children (or of providing dowry for his daughters' marriage).

And hence about Veblen, Mr. Louis Untermeyer in his book "Makers of the Modern World" aptly states that never before had any American so savagely mocked the prevailing canons of taste and culture or castigated the pleasure of spending money by labeling it a foolish way of purchasing prestige. Veblen contended that leisure class makes property synonymous with proficiency and even potency, and feels it vitally important to glorify ostentatious waste and to encourage all classes even the least affluent to do the same.

Weak integration of poor

In conclusion, a reference may be made to views of Prof. R. Sinha and his associates who in their analysis and simulation of the poverty stated that low income status of the poor is the invariably low share accruing to them from income generation since the poor gain only a low share in the value added from all sectors. Manipulation of the structure of output, whether through income redistribution, fiscal measures, or otherwise, can bring at best only a marginal improvement in their relative position.

The basic reason for the low income shares of the poor lie in aspects such as their weak integration

into the process of creation of factor income and their low levels of ownership of productive assets, land, physical capital and human capital. To improve this situation, their greater integration is required into the income creation process and the creation of new assets or through redistribution of existing ones. Until changes of this order take place income transfers, income injection or consumption transfer can be merely palliatives, effective so long as they are consistently renewed.

Thus the ethereal or incorporeal policy approaches to poverty eradication should give way to more subtle, tangible policy steps with resolute determination and honest implementation.

Moreover the policy makers, thinking intelligently and scientists should realise that during the last century our knowledge of the physical world has acquired electronic dimensions. But our social ideals have remained glued to tradition of centuries and imbalance has been created between researches and development in physical and social aspects. The physical scientists have reached miraculous height in research and development of technology but the social scientists have not as yet found answers for socio-economic malady as the abysmal poverty or proliferating inequalities. □

Zinc and iron deficiency affecting rice crop

The micro-nutrient experts of the Punjab Agricultural University have discovered wide-spread deficiency of zinc and iron in the rice crop in Punjab.

Zinc deficiency has inflicted the rice crop on Alkali (Kallar), flood plain (bet) and sandy soils. Symptoms of zinc deficiency appear on older leaves as dark-brown spots like rust. The experts have diagnosed this deficiency despite application of zinc sulphate by the farmers. It was further found that zinc sulphate applied to the crop was spurious in most of the cases.

Deficiency of iron in rice has also been widespread particularly on highly permeable light soils on which water does not stand more than a few hours. The symptoms of iron appear on new growth as interveinal chlorosis followed by complete yellowing of leaves. The older leaves remain green.

The experts have advised the farmers to spray 1 per cent ferrous sulphate solution (1 kg ferrous sulphate in 100 litre water) at 4 to 6 days interval till the deficiency disappears. They should try to pond water for a prolonged period by making small plots. In future, on such soils green manuring should be done before transplanting which greatly helps in mitigating the iron deficiency and simultaneously save 50 per cent nitrogen fertilizer. □

TOWARDS SOCIAL REVOLUTION

a Case for Economic Democracy -

VASANT SATHE

A Serialisation

7

The economic system

ONE OF THE MAJOR SPHERES OF Human activities which influences sometimes controls and promotes, activities in other fields including those of science and technology is the sphere of political economy.

In an earlier chapter we have seen that the entire evolution of man as an intelligent species was possible not only because of his urge to fulfil his animal needs but also because of his hunger for knowledge as well as his desire not merely to adjust to but also to mould and even overcome the environment, namely, the nature around as well as the universe beyond. This motivation, engendered by a mental or intellectual thirst, has made him ask questions and has urged him to find out about himself : his birth and death and their cause. Though whenever he has come across an insurmountable obstacle in his inquiry, he has found solace in attributing the unknown to some supreme power, yet, he has carried on with his inquiry.

It may appear from an historical perspective that the entire evolution or growth of civilisations has been mainly due to factors of personal ambitions of aggrandisement and greed of a few individuals. Yet, in the vast fields of culture, adventure, science, literature and arts, man has been motivated by urges other than mere material greed. Hence, when we consider his political or economic activity, we must, at the outset, reject the thesis often propounded that the only motivating force in socio-economic or political activity is the individual's personal greed for material power and domination over his fellow human beings. This argument is often advanced to justify the existence of economic activity in the name of free enterprise and laissez faire, and it is urged that unless you allow individuals unlimited freedom even in exploiting their fellow human beings, you will not provide motivation for the growth of industrial or business activities. We need not dwell much longer on this point because the fallacy of this argument has been proved over and over again in every field of life.

It is easily understandable that one of the fundamental urges of a human being is to seek fulfilment of his physical and material wants in order to protect himself from the elements, to give him nourishment and to provide him with other facilities for a comfort-

able living which would generate his activities in different fields of his liking and preferences, such as the pursuit of knowledge in the spheres described earlier. This has been so throughout the history of man.

Beyond a certain point, when the normal basic needs and comforts have been fulfilled, the greed for material acquisition springs mainly from the desire to show off against his fellow human beings in terms of a status symbol or a symbol of power. Such a symbol does not serve any purpose of personal satisfaction in terms of fulfilling material wants. Once we allow a state of affairs where individuals can accumulate and control material wealth, even while depriving fellow human beings of their share, then, the whole concept of providing equality of opportunities and social justice becomes meaningless.

As for the right of a human being over his body, as the basis of his right to property, it should be the fundamental right of every human being to decide for himself or herself whether he or she wants to continue to live or not. If a person does not wish to associate himself with society, he should be free to isolate himself. If he wants to totally withdraw from the human society, the choice should be given to him.

As a logical corollary, if a person makes himself harmful to other members of society by any act, then society, as a social anatomy, has every right to cure the diseased member or, if incurable, to discard him as a malignant cell. There should be no moral compunction in this regard.

Hence, in a society like India's which had recently gained independence from political domination and economic exploitation by an alien power, the first and foremost consideration was how to provide an economic structure which would bring about a balance growth of the entire people without being exploited by foreign force or indigenous ones. That freedom from foreign domination should also mean economic freedom from poverty and exploitation for every citizen and particularly the poorest among them was the main political ideal and motivation throughout the independence struggle under the leadership of great men like Mahatma Gandhi, Jawaharlal Nehru and others. It was this emphasis on giving priority

to the problems of the weakest, which was supposed to be the main guideline for all administrative and state activity. The famous quotation of Gandhiji is :

"I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test : Recall the face of the poorest and the weakest man whom you might have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it ? Will it restore him to a control over his own life and destiny. In other words, will it lead to Swaraj for the hungry and spiritually starving millions ?

Then you will find your doubt and your self melting away."

This quotation was often placed on the table of every prominent authority in government. It was with this objective that, under the dynamic and visionary leadership of Pandit Jawaharlal Nehru, was adopted the concept of planning ; to have a planned economy which would enable the evolution of a balanced growth and the uplift of the poor and the hungry millions.

More than 30 years have gone by since we started having a planned economy, and it is time we evaluated its success and ascertained whether the purpose aimed at is being achieved or whether there is any need to reorient or modify our approach in the fields of growth and of economic activity.

In absolute terms, we have achieved great progress in various fields, indeed we have shown a tremendous capacity for development in practically every field of growth. We have built up a solid infrastructure and we have every justification to be proud of our achievements. But having said this, we cannot close our eyes to the fact that growth and development have been restricted to a comparatively small section of the Indian people. We have virtually created a small island of prosperity in a sea of poverty where a small section of the population has all the benefits of modern civilisation. The picture of our national economy is best symbolised by a metropolitan city like Bombay where one can find a vertical growth of skyscrapers and five-star hotels surrounded by the horizontal, sprawling and proliferating slums teeming with the poor.

Can imbalance be more stark ? And yet, it must be borne in mind that there have been benefits resulting from the overall policy in improving the living

conditions. Those who know of the conditions prevailing prior to independence will see a marked change in the general conditions of living when they look at what obtains today in the remotest parts of rural areas. The fact that the average life expectancy has increased from 27 years to 54 years in just three decades speaks for itself.

There is a marked improvement, yet, we cannot ignore the realities of the distortion when we try to find out, as Jawaharlal Nehru himself had sought to do while appointing the Mahalanobis Committee, as to where the whole growth brought about as a result of planned activity had gone. We shall see the staggering reality that the growth has remained concentrated in the hands of the few, leaving the vast majority of our population deprived of not only the benefits, but even the opportunities of development. The army of unemployed is increasing. If we go to the root of most of the problems of social unrest, whether they take the form of a parochial, regional agitation or a linguistic or communal agitation, we will find that at the bottom one of the main reasons is economic discontent, mainly among the younger people, on account of the lack of economic opportunities for having remunerative employment. This particularly creates frustration because they have received general education or sometimes even technical education, but are not able to secure jobs that can help them to eke out a reasonable living for themselves and their dependents. Such young people lose patience and cannot be satisfied with promises of a distant future. Hence, they fall a prey to the immediate appeal of narrower interests. For instance, they start feeling that if the people different from them in terms of language or religion or any other identifiable character are pushed out or thrown out, then more job opportunities and avenues of employment would be created for people of their group. To this basic idea, other emotional issues are added and the agitation gets divested of any rational considerations and goes on being fed and fanned purely by sentiment.

It is not as if the young people, particularly the educated amongst them, lack national perspective or pride in belonging to a big, strong and united nation. They are simply carried away by emotion though it may, in fact, be rooted in economics. The question of economic distortion cannot therefore be wished away or belittled. Table below shows the consumer per capita expenditure according to the twenty-seventh round of the National Sample Survey (NSS) (1973-74).

Distribution of population according to per capita expenditure.

Range of annual expenditure (as per NSS 1973-74) per capita.

	Population (1981 Census)			
	Number (in million) rural	In percentage to total rural population	Number (in million) urban	In percentage to total urban population
(a) Between Rs. 0 and Rs. 408	120.94	23.06	14.83	9.30
(b) Between Rs. 408 and Rs. 1200	359.01	68.46	103.92	65.13
(c) Total (a+b)	479.95	91.52	118.75	74.43
(d) Above Rs. 1200	44.46	8.49	40.78	25.57
(e) Grand total (c+d)	524.41	100.00	159.53	100.00

***The total population of India according to the 1981 census is 683.97 million.

The reader should also see Appendices 1 and 2 for detailed tables provided by the Central Statistical Organisation.

I have deliberately picked up the consumer expenditure figures from the lowest level because what you spend principally depends on what you have or what you earn. It is only what you spend which creates the demand. So the figures based on expenditure are more reliable for the purpose of knowing what is the effective demand that generates economic activity. When analysed, these figures reveal the following facts :

(1) Based on the findings of the NSS and by applying them to the population figures of the 1981 Census, it will be seen that out of a total rural population of 524.41 million, nearly 91.52 per cent, i.e. 479.95 million, have a per capita expenditure of below Rs. 1200 per annum or below Rs. 100 per month. According to the Task Force on the Sixth Plan, a monthly per capita consumption expenditure of Rs. 104 has been assumed as the line of poverty for the year 1981-82, for the rural areas.

(2) In the urban areas, out of a total population of 159.53 million, nearly 74.43 per cent or 118.75 million fall within the annual expenditure group of below Rs. 1200. The corresponding poverty line consumption expenditure is Rs. 113.

(3) Taking both the rural and urban population together, it will be observed that 598.70 million people have a per capita consumption expenditure of less than Rs. 1200 per annum. It is pertinent in this connection to ask ourselves what necessities and essentials can be purchased at the rate of Rs. 100 per month per head (or at the rate of Rs. 3.35 per day) at the present-day prices. Thus, nearly 600 million people out of about 700 million are living below or near the poverty line

(4) About 135.76 million people—120.93 million in rural areas and 14.83 million in the urban areas—are only able to spend less than Rs. 408 per annum (or Rs. 34 per month) on themselves, which means they are just on the survival line, in abject poverty conditions.

(5) This leaves the fortunate class of people who spend Rs. 1200 or more per capita per annum and around whom all the economic activity is concentrated. Numbering 85.24 million, they are scattered almost evenly in the rural and urban arenas. To be precise, 44.46 million in the rural areas and 49.78 million in the urban areas.

(6) At best, the market with any buying power in the rural areas consists of 44.46 million people or 8.48 percent of the rural population and in the urban areas it consists of a population of 40.78 million or 25.57 per cent of the urban population. Taking the country as a whole, this group of 85.24 million people represents 12.5 per cent of the total population of the country.

Those people whose income is between Rs. 100 and Rs. 200 per month can at best have only the bare necessities of life such as food, fuel, clothing, shelter and medicine at the present costs. They can hardly spend on comforts, leave alone saving. Hence, savings can come mainly from those who can spend more than Rs. 200 a month. According to the above mentioned National Sample Survey, the percentage of this population is 0.98 in the rural sector and 5.6 in the urban sector (for details, see Appendix 1). Thus, it is this population of about 20 million which can save and which is the economic market for all major productivity activity.

There is another side of this picture that we must look at to know where and how the main economic activity is concentrated and controlled. After all, it is from the economic activity, both production in factories and farms and distribution through trade, that income is generated. And this income is assessed for the purpose of income tax, which is one of the major sources of revenue of the government. The government has been using the tool of taxation not only to mop up the surplus generated from the economic activity but also to bring about a reduction in the disparities of incomes by the method of adjustment of taxation. We shall presently see as to how many people are involved in this activity. Table below shows the number of income tax assesses in the different taxable income groups, their percentage in each slab of income, the amount realised and its percentage to the total taxes assessed.

Details of income tax (1979-80)

Income Range (Rs.)	Number of assesses	% of total	Income assessed (Rs. Crores)	% of total	Tax Payable (Rs. Crores)	% of total
Below 10,000	136,773	7.5	112.6	1.8	5.2	0.3
10,000—15,000	797,481	43.8	959.6	15.6	57.3	3.7
15,000—25,000	513,707	28.2	968.4	15.8	97.3	5.7
25,000—50,000	248,606	13.7	845.5	13.8	143.4	8.4
50,000—100,000	88,401	4.9	594.3	9.6	127.7	7.5
100,000—500,000	31,362	1.7	532.3	8.6	163.0	9.4
500,000 and above	3,245	0.17	2136.2	34.8	1111.3	65.0
Total	1,819,575*	100.0	6148.9	100.0	1705.2	100.0
More than Rs. 50,000	123,008	6.77	3262.8	53.0	1402.0	81.9
More than Rs. 100,000	34,607	1.87	2668.5	43.4	1274.3	74.4

*This figure also includes companies, which, during the year 1979-80, accounted for 11,636 assessments covering an assessed income of Rs. 2020 crores and a tax demand of Rs. 1075 crores.

Appendix 1. State-wise Percentage Distribution of Number of Households by Monthly Per Capita Expenditure Class (Rural)

State/Union Territory	Monthly per capita expenditure class (Rs)														200 and above classes
	0-13	13-15	15-18	18-21	21-24	24-48	28-34	34-43	43-55	55-75	75-100	100-150	150-200		
Andhra Pradesh	0.97	0.32	1.13	2.83	3.32	4.61	11.17	22.17	20.40	18.20	7.52	5.02	1.29	1.05	100.00
Assam	..	0.17	0.17	0.33	2.50	3.17	7.33	19.50	26.33	26.33	9.50	4.17	0.50	..	100.00
Bihar	0.38	0.15	1.77	1.92	2.15	4.23	9.23	16.54	22.24	21.15	12.00	5.85	1.31	1.08	100.00
Gujarat	0.19	0.19	0.57	0.38	0.75	4.15	7.92	18.87	23.21	23.21	12.26	6.98	0.75	0.57	100.00
Haryana	0.17	0.17	0.51	0.50	0.50	2.65	5.80	11.77	17.03	22.88	17.91	12.34	4.15	3.65	100.00
Himachal Pradesh	0.25	0.51	0.23	0.53	0.25	0.51	2.03	8.38	17.26	27.91	23.60	13.71	3.81	1.78	100.00
Jammu and Kashmir	0.16	0.48	0.48	1.66	1.66	3.17	8.67	17.51	23.73	24.86	10.55	5.65	1.06	0.38	100.00
Karnataka	0.78	0.47	1.55	2.48	4.54	4.65	9.15	15.97	18.45	17.20	11.94	8.99	1.55	2.48	100.00
Kerala	0.45	0.23	0.68	2.42	3.48	6.97	13.71	17.74	17.74	16.89	10.15	6.74	1.36	1.55	100.00
Madhya Pradesh	0.18	0.26	0.88	2.20	2.11	5.90	11.01	18.69	20.71	20.27	8.72	6.87	1.32	0.88	100.00
Maharashtra	0.44	0.44	0.90	0.44	0.44	2.70	7.66	18.47	21.62	32.89	11.26	4.05	0.45	..	100.00
Manipur	0.44	0.44	0.44	0.44	0.44	0.88	3.10	9.29	26.11	33.64	16.81	6.64	0.44	1.77	100.00
Meghalaya	0.74	0.89	2.53	3.42	5.65	11.31	16.37	20.09	13.84	15.92	5.36	2.98	0.45	0.45	100.00
Nagaland	..	0.15	0.30	0.30	0.30	0.15	2.84	9.25	18.95	24.32	18.66	16.72	5.67	2.69	100.00
Orissa	0.11	0.33	1.76	2.63	4.83	5.71	12.29	19.54	19.97	17.78	8.56	4.72	1.54	0.33	100.00
Punjab	0.11	0.11	0.34	0.90	1.91	4.32	11.88	21.75	21.91	20.07	10.54	4.54	0.95	0.67	100.00
Rajasthan	1.26	1.46	2.33	3.88	5.53	8.36	14.37	17.67	17.67	13.59	8.25	3.88	1.36	0.39	100.00
Tamil Nadu	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tripura	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Uttar Pradesh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
West Bengal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Andaman and Nicobar Islands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arunachal Pradesh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chandigarh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Delhi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Goa, Daman and Diu	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lakshadweep	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mizoram	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pondicherry	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
All India	0.39	0.35	1.06	1.92	2.96	5.28	11.10	18.53	20.19	19.48	10.26	5.07	1.46	0.95	100.00

Note : .. negligible; — Not covered by survey

Appendix 2. State-wise Percentage Distribution of Number of Households by Monthly Per Capita Expenditure Classes (Urban)

State/Union Territory	Monthly per capita expenditure class (Rs)															All above classes
	0-13	13-15	15-18	18-21	21-24	24-28	28-34	34-43	43-55	55-75	75-100	100-150	150-200	200 and above		
Andhra Pradesh	..	0 15	0 45	0 45	0 80	2 26	6 93	15 36	19 28	21 53	15 06	11 45	3 92	2 86	100 00	
Assam	..	..	0 44	..	..	0 87	3 93	6 55	18 78	16 16	18 90	19 21	9 61	6 55	100 00
Bihar	0 20	..	0 41	..	0 81	1 22	5 09	10 59	17 11	21 60	18 94	15 27	4 28	4 48	100 00	
Gujarat	..	0 28	..	0 28	..	1 40	3 64	12 61	15 69	27 72	18 49	13 17	4 76	1 96	100 00	
Haryana	..	..	..	..	0 42	1 26	5 02	10 46	13 39	23 01	14 64	15 48	7 11	9 21	100 00
Himachal Pradesh	..	..	..	..	..	..	1 67	..	8 33	18 33	11 67	31 66	11 67	16 67	100 00
Jammu and Kashmir	..	..	..	0 20	0 60	2 81	7 63	16 87	26 30	22 29	9 84	9 84	2 61	1 01	100 00
Karnataka	..	..	0 27	0 54	0 81	2 98	6 23	14 37	13 82	24 40	14 36	13 01	5 42	3 79	100 00
Kerala	..	0 41	0 82	1 22	3 27	4 49	7 76	11 43	17 95	13 06	13 47	10 61	9 39	6 12	100 00	
Madhya Pradesh	..	..	0 22	0 22	1 11	1 55	7 54	10 42	20 62	23 28	16 63	18 42	2 22	3 17	100 00
Maharashtra	0 10	0 10	0 10	0 52	0 73	2 52	4 93	8 81	12 07	16 59	16 80	17 74	9 86	9 13	100 00	
Manipur	..	..	..	..	..	..	..	13 21	13 21	33 95	22 64	13 21	1 89	1 89	100 00
Meghalaya	..	..	..	..	..	..	..	3 92	1 90	25 49	9 80	25 53	13 73	21 57	100 00
Nagaland	..	..	..	..	..	..	..	..	3 45	13 79	24 14	34 49	13 79	10 34	100 00
Orissa	..	..	..	0 92	1 38	4 15	6 45	17 51	11 06	14 75	15 21	18 90	2 30	7 37	100 00
Punjab	..	..	..	..	..	..	1 90	6 46	15 59	22 06	19 77	18 63	8 75	6 84	100 00
Rajasthan	0 31	..	..	..	0 31	1 55	4 33	12 69	14 86	26 33	14 55	16 10	4 33	4 64	100 00
Tamil Nadu	0 13	0 54	0 13	0 54	1 08	4 30	5 38	14 92	22 04	20 03	12 77	11 69	3 90	2 55	100 00	
Tripura	..	..	..	..	..	..	..	4 76	19 05	33 34	21 43	4 76	9 52	7 14	100 00
Uttar Pradesh	0 12	0 12	0 23	0 23	1 15	2 19	7 27	16 38	18 69	21 44	13 73	11 07	4 15	3 23	100 00	
West Bengal	0 54	0 14	0 68	0 27	0 95	1 35	3 51	8 92	9 59	19 46	19 73	20 68	8 38	5 81	100 00	
Andaman and Nicobar Islands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arunachal Pradesh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chandigarh	..	..	..	..	..	..	..	..	8 33	12 50	16 67	12 50	12 50	37 50	100 00
Delhi	..	..	0 60	..	1 20	6 60	1 20	7 19	16 17	22 75	17 96	17 96	6 59	7 58	100 00
Goa, Daman and Diu	..	..	..	..	..	..	4 35	..	21 74	26 09	4 35	34 77	8 70	..	100 00
Lakshadweep	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mizoram	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pondicherry	..	..	..	..	..	3 23	6 45	12 90	29 03	22 58	16 13	3 23	..	6 45	100 00
All India	0 13	0 15	0 28	0 36	0 85	2 26	5 27	12 05	16 27	20 85	15 96	14 70	5 85	5 02	100 00	

Notes ..Negligible : — not covered by survey.

Source: All-India Income Tax Statistics 1979-80. Directorate of Inspection, Department of Income Tax, Government of India, New Delhi.

The foregoing figures disclose that the total number of income tax assesseees for the year 1979-80 account for a little over 1.8 million. This means that out of a population of approximately 700 million, the total number of persons from whom income tax is collected is only approximately 1.8 million. Out of this, nearly 75 per cent of the tax is paid by those whose assessed income is Rs. 100,000 and above, and the number of such assesseees is only 34,607. It is pertinent to note that the assesseees whose annual taxable income is Rs. 500,000 and above and who pay 65 per cent of the total

taxes number hardly 3,245 in the whole population of India. This figure shows how many individuals and corporate houses more or less control the entire economic activity. The other assesseees, who mostly belongs to fixed income groups, such as government servants and employees to the private sector, professionals and small traders, fall within the range of income that is below Rs. 50,000 per annum and their number comes to 1,696,567 or 93.23 per cent of the total number of assesseees accounting for only 18 per cent of total income tax collected. Although these persons play a contributory role in the economic activity of the country, they cannot be said to really regulate or control this activity.

(Next Issue: Monstrous Growth of Black Money)

Record production by Hindustan Zinc

With the better availability of power supply to Company's Rajasthan-based units, Hindustan Zinc Ltd. units have achieved all time high record production during the year 1983-84. As a result, the loss suffered last year has been converted into net profit for the year ending March 31, 1984, according to the quick estimates made so far.

Metal production-smelters

Set to produce 31,500 tonnes of zinc in 1983-84, Zinc Smelter, Debari produced 32,540 tonnes which is 103 per cent of the target and 72 per cent of the capacity utilisation during the period under report. A significant factor in zinc production at Debari has been the record capacity utilisation of 94.5 per cent during the period August 1983 to January 1984 when power supply was near normal.

Vizag Zinc Smelter which had a target to produce 23,500 tonnes of zinc during the same period, produced 21,216 tonnes which works out to be 90 per cent of the target and 71 per cent of the capacity utilisation. Cumulatively, 53,756 tonnes of zinc has been produced during 1983-84 against a target of 55,000 tonnes. Compared to last year, the increase in zinc production during the current year is 23 per cent.

Total zinc production of 53,756 tonnes is an all time record production achieved so far and corresponds to 98 per cent of combined annual target and 72 per cent of combined capacity utilisation.

In case of lead, Tundoo Lead Smelter in Bihar produced 7,272 tonnes of primary lead against a target of 7,000 tonnes for the year 1983-84 i.e. 104 per cent of the target. The Vizag Lead Smelter, during the same period, produced 8,147 tonnes against a target of 11,000 tonnes which corresponds to 74 per cent of the target achievement. Total primary lead production during 1983-84 has been 15,419 tonnes which works out to be about 86 per cent of the target and 70 per cent of the capacity utilisation. Compared to the production last year, the increase in primary lead production has been over 4 per cent during the year under report.

Silver production during the year 1983-84 by Tundoo and Vizag Smelters was 18.3 tonnes against the combined target of 21 tonnes. This represents 87 per cent of the targetted production.

Production--mines

At Zawar Group of Mines 64,600 tonnes of zinc concentrate and 22,400 tonnes of lead concentrate were produced during the year against the target of 64,500 and 20,100 tonnes which mean 100 per cent and 111 per cent achievement of the targetted production and 97 per cent of capacity utilisation.

Similarly, at Agnigundala mine, lead concentrate production achievement has been 89 per cent of target. Though Rajpura Dariba Mine in Rajasthan and Sargipali Lead Mine in Orissa commenced trial production during the year 1983-84, even then Rajpura-Dariba Mine produced 18,900 tonnes of zinc concentrate against the target of 22,780 tonnes and 7,400 tonnes of lead concentrate against the target of 7,490 tonnes which correspond to 83 per cent and almost 100 per cent achievement of the targets respectively.

Similarly, 4,700 tonnes of lead concentrate was produced at Sargipali which is 87 per cent of the target.

Total lead-zinc concentrate production during 1983-84 has been 1,22,627 tonnes compared to the combined target of 1,24,395 tonnes which corresponds to 99 per cent of the cumulative target. In comparison to last year, the increase in lead-zinc concentrate production has been over 51 per cent.

At Maton Mine the ore production, total excavation, milling and rockphosphate concentrate production during the year 1983-84 have been 102 per cent, 94 per cent, 80 per cent, and 77 per cent annual target respectively. Quantitywise, Maton Rockphosphate Mine produced 88,760 tonnes of ore, milled 70,880 tonnes and produced 39,630 tonnes of concentrate. [1]

New Arrivals June 1984



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1	National Resistance of Different Species of Indian Timbers to Marine Wood-Borers in Bombay Waters (Print 1983) PFRI 193	11.50
2	All India Directory of Industrial Establishments (List of Registered Factories, 1978) Volume I Food (Except Beverages) Industries Manufacture of Grain Mill Products (Print 1984) PDLB 6 I 78	181.00
3	All India Directory of Industrial Establishments (List of Registered Factories, 1978) Vol II Agriculture Production, Manufacture of Food Products (Except Grain Mill Products) Manufacture of Beverages, Tobacco and Tobacco Products and Manufacture of Jute Hemp and Mesta Textiles (Print 1984) PDLB 6 II 78	194.00
4	All India Directory of Industrial Establishments (List of Registered Factories, 1978) Vol III Textile and Textile Products (Cotton, Wood, Silk and Synthetic Fibre Textiles etc.). (Except Jute, Hemp and Mesta Textiles) (Print 1984). PDLB 6 III 78	145.00
5	All India Directory of Industrial Establishments (List of Registered Factories, 1978) Vol IV Manufacture of Wood and Wood Products, Paper and Paper Products, Printing, Publishing and Allied Industries, Leather and Fur Products (Except Repair) (Print 1984) PDLB 6 IV 78	202.00
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9	Official Directory as on 1st February 1984 (Print 1984) PHD 278 1 84	22 50
10	The Delhi School Education Act, 1973 (as on the 1st June 1983) (Diglot) (Print 1983) 18 of 1983	1.75
11	The Indian Penal Code (as on the 1st July 1982) (Diglot) (Print 1982) 45 of 1860	4 80
12	Agricultural Situation in India, December, 1983	4.00
13	Indian Labour Journal, February 1984	10 60
14	Journal of the National Building Organisation and UN Regional Housing Centre Escap October, 1983	25 00

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Food and nutrition : Some facts

Three main cereal crops provide the basic food for most of mankind, whether directly or converted into meat and dairy products. We reproduce below some facts about their production (1979 figures).

Food production

Main producers

Wheat :										
441 million metric tonnes	USSR	U.S.A	China	India	France	Canada	Australia	Turkey	Other	
	27%	11%	10%	7%	5%	5%	4%	4%	27%	
Rice :										
376 million metric tonnes	China	India	Indonesia	Bangladesh	Thailand	Japan	Burma	Vietnam	Other	
	35%	29%	7%	5%	4%	4%	3%	2%	18%	
Maize :										
363 million metric tonnes	U.S.A.	China	Brazil	Romania	S. Africa	Argentina	Mexico	France	USSR	Other
	49%	9%	4%	3%	3%	3%	2.5%	2.5%	2%	22%

Food and population 1950-1980

1950 to 1971 was an era of unprecedented growth in food production - yields on existing cropland were raised dramatically by energy-intensive agriculture. Since 1971, however, gains in output have barely kept pace with population growth.

Year	Population (billions)	Grain Production (million metric tonnes)	Grain Production per head (kilograms)
1950	2.51	631	251
1960	3.03	863	285
1970	3.68	1137	309
1971	3.75	1237	330
1972	3.82	1197	314
1973	3.88	1290	332
1974	3.96	1256	317
1975	4.03	1275	316
1976	4.11	1384	337
1977	4.18	1378	330
1978	4.26	1494	351
1979	4.34	1437	331
1980	(prel.) 4.42	1432	324

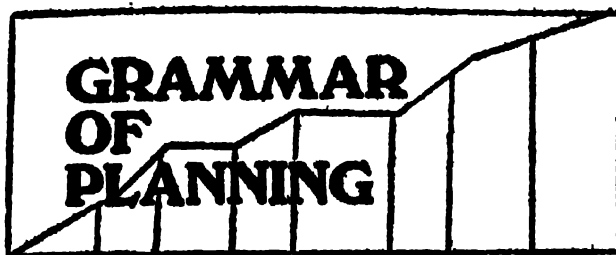
Undernutrition in developing countries

FAO estimates that about one quarter of the people in the developing countries are undernourished, three-quarters of whom are in the Far East. Twelve countries suffer from undernourishment on a vast scale : India (201 million), Indonesia (33 million), Bangladesh (27 million), Nigeria (14 million), Brazil, Ethiopia and Pakistan (12 million each), the Philippines (10 million), Afghanistan (6 million), Burma, Colombia and Thailand (5 million). More than 40 per cent of the populations of Ethiopia, Chad, and Haiti are undernourished.

	Africa	Latin America	Near East	Far East
Population in millions*	320	317	192	1090
No. of undernourished (in millions)	72	41	19	303
Percentage of undernourished	23	13	10	28
Daily calorie deficit in 1,000 millions	52	30	15	214

*Data based on information for 86 developing countries for 1974-76.

(Courtesy : UNICEF News)



P.R. Dubhashi

The substance of planning

In the last chapter, the author highlighted the various aspects of project planning, among others, the identification of project, selection of location, market demand and preparation of project reports. Here he discusses the substance of planning which consists of programmes of production and distribution in the primary, secondary and tertiary sectors of the economy. Planning for each sector has to be carried on in the fullest details integrating technical, economic and organisational aspects, he adds.

* THE SUBSTANCE OF PLANNING consists of programmes of production and distribution in all the three sectors of the economy. They are directed towards the realisation of goals of planning, viz., greater production and employment and more equitable distribution. Greater production is sought to be accomplished by augmenting the supply of factors of production involved in the production process and by raising the productivity of these factors by the application of new knowledge made available by research, i. e., by the application of science and technology, and by better organisation in the form of a variety of institutions.

Primary sector

The sector of primary production consists of agriculture, animal husbandry, fishery, forestry, sericulture, etc. Agricultural sector is rightly considered basic to planning for economic development. As Barbara puts it, though agriculture and industry are essentially interdependent—Janus head of a single productive process the launching pad is agriculture.

The factors of production for agriculture include soil and water resources, manpower, bullock power

and mechanical power, in addition to solar energy and inputs consisting of seeds, fertilisers, pesticides and implements.

The soil has various characteristics which are suitable for different crops and one of the objectives of the scientific agriculture research is to prescribe a cropping pattern which is suitable to the agro-climatic conditions. Secondly, the soil needs to be developed, reshaped, and reclaimed, wherever necessary, either by the application of chemicals or by drainage.

The water resources, firstly, consist of surface water which is harnessed through irrigation projects—major, medium and minor—like dams, diversion weirs, bunds, etc. The major irrigation dams consume substantial plan resources but are reckoned amongst spectacular achievements of planning. Thus Khuzistan, a vast desert valley along Iran-Iraq border, has begun to bloom again, thanks to the construction of a mighty dam storing the water of the Dez river. Mighty irrigation projects like Bhakra-Nangal, Tungabhadra and Nagarjunkonda are the 'temples of Modern India'. The sub-soil water is harnessed by dug wells or bore wells, fitted with pumps which are serviced either through bullock power, diesel pumps or electric pumps.

The agriculture inputs are sought to be improved by high-yielding and hybrid varieties of seeds. In recent years, there has been a break-through in agriculture through a genetic revolution brought out by the so-called miracle seeds like Mexican varieties of wheat, such as Sonora Sonalike, Choti Lerma, Safed-Lerma, Larma Roza, or U.P. 301; improved variety of millets like CHS series of jowar, improved varieties of rice like I.R.8, I.R.20, etc., or improved varieties of cotton like hybrid 4.

New types of fertilisers and pesticides are also being manufactured. This is the chemical revolution in agriculture. For a long time, traditional agriculture depended on compost and green manure which could contribute only limited amount of nitrogen or other nutrients to the soil. Chemical fertilisers are able to contribute more effectively to the building up of productivity of soil. The chemical fertilisers, however,

have different contents of nitrogen, phosphorous and potash and these different combinations have to be applied according to the deficiencies in the soil as found through soil analysis conducted at the soil testing laboratories.

The input of seeds, fertilisers or pesticides, development and reclamation of land and construction of wells require a large amount of investment which the farmers may not be able to meet out of their limited incomes which are rendered uncertain through season's variations. Financial institutions are, therefore, required to give the necessary amount of short term, medium term and long term credit. The financial institutions may either be cooperative or commercial banks. A network of agencies for the distribution of input and credit reaching down right to the village level are required to service agriculture.

Inputs and incentives

Agriculturists also must have necessary incentive. The two inputs and incentives are equally important. The incentives are to be provided by the market for agricultural products. Hence, marketing and processing institutions are required. Where there is a public distribution system, substantial part of surplus production may be bought by public agencies. They must, however, offer reasonable return or else farmers will withhold production and the long term effects may be damaging to agriculture. The policy to squeeze agriculturists of their surplus at low prices for industrial development adopted in the early years of Soviet economic development, known as war communism, did long-term damage to Soviet agriculture.

In a socialist economy, even land as a primary means of production can be socialised through the cooperatives, collective or State farms. The Russian State farms (Sovkhozis) or Collective farms (Kolkhozis) are of a giant size—each a thousand of acres. They are described as veritable grain factories. Forty years after Stalin socialised Russian agriculture, Soviet farming has embarked upon another major scheme of reorganisation. The so-called Brezhnev Plan was outlined in the Communist Party plenum in December 1973.

According to the scheme of reorganisation, collective and state farms were to give way to larger and more integrated 'rural units' with increased specialisation in livestock, breeding, fodder production and other food output. These large farm conglomerates would be integrated structures around bigger farm 'townlets'. The new farming system would also have to accomplish social tasks. They would be large self-supporting rural communities better provided with health and recreational services.

Collective agriculture

The Israeli forms of collective agriculture are perhaps the most successive examples of collective effort inspired by a revolutionary fervour. In Kibutz, the entire land and means of production are socially owned and managed. Even the children are brought up together and there is a common kitchen and dining hall. In Moshav Shitufi, the cultivation is individual

but collective services are made available. In between stand the Moshavs.

However, not all socialist countries have socialised agriculture though they might have socialised industry or distributory trade. The difficulties in socialising agriculture arise out of the facts that the number of units of agricultural production are large and scattered and the traditional attachment of the farmer to his land is deep rooted. In such conditions, it is felt much better to allow the private individual units of production, to continue but at the same time provide farmers, particularly the smaller and marginal farmers with extension facilities and organise them for the purposes of supply of services and credit into cooperative institutions.

However, if agriculture is not socialised, other agricultural changes are needed. Agricultural reforms needed for liberating the farmers from the clutches of landlords and money-lenders or other intermediary interests are considered to be indispensable. This is achieved through legislation for the abolition of landlordism and system of protective tendency and making it possible for tenants to secure their ownership rights. Japan is a successful example where agriculture is modernised retaining individual cultivation while providing services through multipurpose cooperatives.

Like agriculture, dairy industry can also be organised on a cooperative basis or it could form the activity of the State. AMUL in Gujarat has provided a successful pattern of cooperative dairying in India.

Animal husbandry plans

Animal husbandry resources consist of cows, bullocks, buffaloes, sheep, poultry and other animals. Cattle are required to provide bullock power where mechanical power is not available and for dairy development. Dairy and other animal husbandry occupations can provide a useful supplement to agriculture or they could be developed as independent occupations in their own right. The animal husbandry programmes consist of scientific breeding, weeding, tending and feeding. Breeding through artificial insemination has become an accepted programme of scientific animal husbandry. But this again requires organisation in the shape of series of artificial insemination centres whose services are readily available to the farmers. At the same time, indiscriminate breeding has to be eliminated by castration of scrub animals. The feeding programme must be based on the growth of nutritious grasses like lucern and burseem and preservation of grass through silage method. The animals are liable to be affected by severe diseases like Rinderpest and foot and mouth diseases and need to be protected through inoculation. These services are to be provided by veterinary dispensaries.

The development of poultry and sheep, like the development of cattle, has also to be based on a programme of scientific breeding integrated with other activities like improved breed, prevention and protection from diseases, technical supervision and marketing. Thus, among the superior breeds of poultry are Rhode Island, which is a meat variety, and white leg

horn, which is recommended for eggs. New techniques like deep litter methods have also to be widespread.

In sheep breeding, exotic varieties like Marino rams are used for cross breeding purposes. The shepherds are normally a wandering lot and their training and organisation has to be a special effort.

Horticulture development

Horticultural development requires a vigorous programme of supply of seedlings, arrangement for marketing of fruit, cold storage, dehydration, protection of crop from disease, introduction of techniques like grafting, budding, etc. The horticultural development requires long range planning because of the time taken for the growth of plantations of fruits like coconuts, arecanuts, mangoes, and apples. Fruit and vegetable development is a significant part of development planning because of their contribution to raise the levels of nutrition. Horticulture may either be an integral part of agricultural activities of a farmer with some portion of land devoted to fruit or vegetable or it may be an independent enterprise in itself.

Fisheries can be either island or marine. Here, as in other sectors of agricultural activity, development planning would include introduction of new technology, including use of nylon nets and trawlers for deep sea fishery, augmenting fishery development in tanks by induced breeding, arrangement for cold storage and transport, organisation of fishermen into cooperatives, marketing and processing of fish, setting up bone-meal plants, etc.

The planning for the production of milk, eggs, fruits, vegetables and fish has to be linked with nutritional planning so that the poor, vulnerable sections of the community who find protective food beyond their purchasing power are able to secure it through a programme of free or subsidised supply.

Like horticulture, afforestation and plantation also require long range planning. Afforestation is particularly significant for a country's economy from the point of view of maintenance of ecological balance. Destruction of forest can lead to large scale erosion of soil and silting of tanks with disastrous effects on economy. In addition to the protection of natural forest, attention has to be paid to the building up of artificial forests, as in Japan where in spite of population pressure, nearly 75 per cent of the area is under forest.

Plantations of tea, coffee, rubber are of the nature of industrial enterprises. They require considerable investment and they are considered to be bankable propositions.

The agenda of agriculture planning should consist of the following programmes of action :

1. Fundamental and adaptive research.
2. Extension of the research to individual units of production.
3. Supply of agricultural inputs and credits.

4. Development of agricultural productivity through investment in irrigation, electrification and mechanisation.

5. Provision of infrastructure facilities like road, communication and storage.

6. Incentive through pricing policies and marketing and processing facilities.

Through these programmes, it is possible to transform traditional agriculture with stagnant income and low productivity into modern dynamic agriculture with rising productivity.

Secondary sector

Industrial planning has to be considered for various sub-sectors of industry like large scale industry, medium industry, small industry and rural industry. The industrial development depends on mobilisation of capital, supply of raw material, availability of necessary machinery and plants and technical manpower. Various services like designing, marketing, credit and insurance, and organisation and incentives have to be provided.

Industries in fields like steel, coal, ship building, locomotives, airplanes are so large that even in non-socialist economies they are owned by the state. The plan should include proposals carefully worked out for each public sector enterprise, estimate of its investment, employment, output, potential benefit, financial or otherwise, etc. Where private sector is fairly large, similar specific targets, industrywise, may have to be worked out for private sector enterprises also since the rate of economic development depends more on what happens in the private sector than it does on expenditure in the public sector.

Planning of small scale industries is normally left to individual entrepreneur. But they require considerable promotional assistance by public agencies and banking institutions, like necessary allotment of raw-material and finance and technical supervision.

Industry and agriculture are interlinked in a huge process of agro-industrialisation, penetrating to the depths of the economy. Thus, industry demands agricultural raw materials while agriculture requires industrial inputs like fertilisers, pesticides and implements.

Tertiary sector

Both industry and agriculture need various facilities of the tertiary sector, mainly supply of power, transportation facilities and banking services which also need to be planned in an integrated manner.

Power planning has to be a long-term proposition. Power plants take years to complete. They have to be so planned that supply of power keeps pace with demand. The demand for power in developing economy increases at an increasing rate and if it is not planned in advance, power can be a basic constraint of economic development. Power projects can be either hydro-electric or thermal or atomic. Since hydro-electric projects cannot work to full capacity when

rains fail to fill up the reservoirs, thermal power has to fill in the gap. Generation of power has to go hand in hand with the planning for the transmission of power and, in the drive for improved productivity, elimination of transmission losses has also to find a place.

A key role

Transport plays a key role in economic development. Economists like Kindleberger accord it a central role. Economic historians like Lilian Knowles have pointed out that transport played a key role in the commercial and industrial revolution of Great Britain and other advanced countries. Transport can take place either by railway or by road through trucks or through boats across rivers or canals. While railway carriage is normally a state monopoly, road transport is in the private sector. But planning for transport arrangement on any of the three routes depends on planning for the manufacturer of rail carriages or trucks.

Planning for banking development has to take into account rising income and consequent increase in potentialities for deposits and advances for agriculture and industry. Banking institutions tend to be concentrated at the metropolitan centres and deliberate planning is required to direct them to new and developing areas which for the moment may appear to be backward. A systematic programme of branch expansion is, therefore, essential.

Social infrastructure

If roads, transport, irrigation, power projects and electrification provide the economic infrastructure, education, health and housing provide the social infrastructure. The educational system has to provide universal primary education, secondary and higher education and technical and vocational education. Education may be an end in itself but it is the educational system which has to provide the reservoir of manpower, with requisite knowledge and skill for economic development. The plan has, therefore, to ensure that the economic development does not suffer in the absence of manpower of right quantity and quality and at the same time see that educational system does not throw up products which cannot readily be absorbed in the economic system, thereby giving rise to the phenomenon of the "white collar unemployment". The traditional educational system evolved by the erstwhile colonial rulers of developing countries may not quite be appropriate to the tasks of economic development. In particular, there is need to correct the bias of the educational system towards purely liberal education. Technical courses in agriculture and industry and vocational courses are needed for scientific agriculture and technological change.

Health, like education is an end in itself as well as a means of economic development. Health manpower is also more productive. Sicknes interrupts production and by sapping energy reduces productivity. But by sharply reducing mortality rate as compared with the birth rate, measures for health improvement tend to raise growth of population rather sharply. Health

programmes would involve both preventive and curative measures.

Among the preventive measures are included provision of drinking water supply, environmental sanitation and immunisation. In most underdeveloped countries even safe, potable water supply is not available to many rural communities. Obviously, this is the first charge on any development budget. The curative services are not available even to a minimum possible extent. Medical personnel tend to concentrate in cities, leaving rural areas to the mercies of quacks. Hence the need for setting up rural health centres. The advanced countries have already provided comprehensive health insurance schemes. It could be a long time before anything of that standard of health service is set up in underdeveloped countries.

Housing may have less urgency and expenditure in tropical countries compared with cold countries. But in most developing countries, it is so inadequate as to require huge investment. The housing problem can be dealt with to a small extent by public housing but bulk of the housing has to be private and supported by institutional finance.

With the migration of rural poor to the cities, the latter suffer from slums and overcrowding and city housing becomes an important matter of public policies and programmes. Slum clearance schemes find a place in planning but the problem cannot be tackled without a wider set of economic measures directed towards dispersal of industry and employment opportunities.

Thus, planning for each sector or sub-sector of the economic activity has to be carried on in fullest details integrating technical, economic and organisational aspects.

(Next issue : The organisation of planning)

Sino-Indian trade agreement

INDIA AND CHINA have recently signed a new trade agreement in Beijing. The agreement has been hailed by both sides as leading to greater cooperation between the two Asian giants

India's trade with China was resumed in 1977 on a modest scale after a total disruption of over 15 years. As both countries took steps to normalise their relations over the past few years, the issue of trade came to the fore, although the border question remained unresolved. But in the absence of a framework, the Sino-Indian trade lacked a clearcut perspective to achieve a targeted objective. For the first time, the framework has been provided in the new trade agreement.

Under the agreement, a wide range of commodities have been covered to include ferrous and non-ferrous ores, sugar, shellac, tobacco, raw cotton, medicinal herbs, finished leather and light engineering goods.

Among the significant items that India would be able to export to China are machinery, instruments, equipment and tools, besides complete plants for cement, sugar and textiles.

You and your health

The gas trouble is indeed very common; functioning every third patient consulting a physician has this complaint. One of the aims of the treatment of this belly malfunctioning should be to ensure normal bowel functioning. This can be achieved by providing the patient a high fibre diet, a diet with a fair amount of roughage, says the eminent physician.

GAS, GURGLING, FLATULENCE, flatovent, burping, belching, bloating, and distension are only some of the terms used by patients to describe their "gas trouble". Distinction between these terms are often neither appreciated by the patients nor by their treating physicians. An all encompassing word, turbulence, was coined by a great contemporary American poet, Ogden Nash, to cover all these 'windy' conditions while composing the following verse :

'How do I feel today ? I feel as unfit as an unfiddle. And it is the result of certain turbulence in the mind and an uncertain turbulence in the middle.'

(Marriage Lines, p. 64, Aldine Press, Letchworth)

Prima facie, these symptoms sound rather trivial but they can be very incapacitating to the patients. It is their persistence and frequent recurrence that bother the patients. Besides the physical discomfort caused by "gas", the patients suffering from it are apprehensive of the social embarrassment, caused by increased passage of gas per rectum, i.e. farting or flatus. Since farting has acquired over the years a connotation of rudeness, flatus is the preferred term.

The gas trouble is indeed very common; every third patient consulting a physician has the complaint. And, it has certainly been recognised for a very long time since remedies for it are mentioned abundantly in Ayurvedic literature. Indeed, air in the body *Vata* is considered as the most important of

Gas in your tummy?

Dr. Rakesh Tandon

the *Tridoshas*, imbalance of which is the cause of all diseases. The other two are *pitta* and *Kapha*. Some of the indigenous medicines and choorans may help, but for a rational treatment a scientific analysis of the gas and an understanding of the mechanisms of its production are essential.

Volume of intestinal gas

The intestinal tract of a fasting individual contains less than 200 ml gas; he passes flatus about a dozen times a day, the total amount of gas discharged per day averages to about 600 ml. There is, however, a wide variability in the quantity and frequency of flatus passed by individuals; diet being the most important determinant. There are patients who are unable to digest milk properly; they tend to have a 'gassy abdomen'. Green vegetables such as cabbage, sprouts, spinach and, most importantly, beans tend to produce an excess of gas. Therefore, people who are used to taking these kinds of foodstuffs have more gas in their hollows than others have.

About two-thirds of the gas in the abdomen is swallowed and the rest is produced in the intestines from two sources : one by bacterial fermentation of food residue, and the other by diffusion from the blood into the intestines.

Composition of gas

Intestinal gas is a mixture of five gases, viz. nitrogen, carbon dioxide, hydrogen, methane and oxygen, in the order of decreasing concentration. The relative proportions of these gases vary depending on three main factors : (a) the amount of swallowed air, (b) the type and amount of intestinal bacteria, and (c) the diet.

(a) **Swallowed air** : About 2-3 ml. of air goes down your food pipe with each swallow. Most of it is burped out but a small portion of it passes down the intestines. Swallowing of air is very much increased in a state of anxiety or when there is a painful throat or chest. Also, chronic chewers of tobacco, betel nuts, pan-masala or chewing gums are prone to swallowing more air than others. The swallowed air contains mostly atmospheric nitrogen and, therefore, its passage is odourless.

(b) **Bacteria** : Carbon dioxide, hydrogen and methane are the main gases produced by bacterial fermentation of food residue. Different bacteria produce different proportions of these gases and the flora is determined mostly by the kind of food the individual takes. People living in certain parts of the world such as India where personal hygiene is generally poor, may be harbouring more bacteria in their intestines than others. Such individuals are likely to produce more "gas".

Certain inherent defects in an individual could also lead to the growth of a particular kind of bacteria in the intestine, and hence the production of a specific type of gas. For example, the production of methane seems to run in families, and it is this gas that produces the most offensive and obtrusive kind of flatus. It is methane that also is responsible mostly for floating stools.

(c) **Diet**: Carbohydrates are generally totally absorbed in the intestines but in cases where a specific carbohydrate is not fully digested, the undigested sugar forms a good substrate for bacterial fermentation and gas production. The best example is of milk sugar (lactose) in certain adults who do not have the power to digest it. This loss of digestive power could also develop temporarily after an episode of gastroenteritis or any other acute intestinal infection. Similarly, legumes like beans contain indigestible forms of carbohydrates, viz. raffinose and stachyose, which are fermented in the large intestine by the action of bacteria and lead to significant gas production.

Clinical disorders

They include burping, aerophagy, belching borborymi, distension, and pain in the abdomen and excessive gas formation and passage of flatus.

Burping is the term given to noisy eructation of air under voluntary control. This happens secondary to sucking of air, and is commonly seen in infants sucking in milk from the bottle. Indeed, the mother is advised to put the child in an upright posture after each feed to encourage burping. Often adolescents learn the trick of burping and use it as a means of fun. In others, especially adults, this could either be the results of fast eating, gulping in large quantities of food and with that some air, or due to an underlying nervous. An unexpected onset of burping could, however, indicate a medical problem such as cardiac ischaemia and should not be ignored.

Aerophagy : As implied by the term it refers to swallowing of air but it is in fact sucking in of air by gulping action. This occurs frequently in individuals under nervous stress. The swallowed air distends the abdomen, make the individual uncomfortable and is followed by burping.

Individuals sucking air during sleep are helped by a change of sleeping posture or by using an extra pillow during sleep.

Belching : Belching is a sudden, noisy and involuntary release of air from the stomach. Individuals, who are not able to burp out the "swallowed" air easily end up with belching which is not under their control. The unexpected explosive release of air can

cause the individual much embarrassment. It, however, does not indicate any underlying disease.

Borborygmi : Many individuals, particularly the asthenic type, are sometimes aware of gurgling in the abdomen. This is because of the movements of the intestines which contract regularly. In states of poor digestion, large amounts of unabsorbed carbohydrate reach the lower portions of the intestines. As a result hydrogen and other gases are produced. These stimulate further the intestinal movements.

Large intermittent gurgling with visible peristalsis over the abdomen may be a sign of intestinal obstruction. This has to be seen and evaluated by a physician because this may require an active medical or surgical intervention.

Passage of flatus

The various causes of excess gas production in the abdomen have already been alluded to. Of these carbohydrate malabsorption, particularly the inability to digest lactose, i.e. the milk sugar, is the commonest cause leading to excess production of hydrogen and other gases. Methane, as mentioned above, is perhaps the most offensive of all gases.

Bad odour from mouth is most commonly due to exhalation of short chain fatty acids. These are by-products of fat produced during its digestion. Such individuals should be advised to reduce their fat intake. Adding fibre, such as bran, in the diet and also giving neomycine by mouth can significantly reduce the bad odour of their stools and flatus. Beans and other vegetables that are known to produce excess of gas should be eliminated from the diet in case the patient has the complaints of excess passage of flatus.

Distension & abdominal pain

Abdominal distension in our community is most often due to fat or fluid in the abdomen or an organ enlargement. Certain intestinal infections, particularly giardiasis and certain diseases like gallstones and emphysema of the lungs can produce gaseous distension. If these have been excluded, then "gas" could be the reason. Swallowed air can get trapped in the upper part of the stomach and intestines, and cause discomfort and distension of the abdomen. This is called "gas-bloat" syndrome.

Similarly, gas produced in the intestines may get trapped in one of the recesses of large intestine called the splenic flexure and produce distension and pain. This is called "splenic flexure" syndrome. It is caused by spasm of the large intestines which may be relieved spontaneously, or with drugs as mentioned below.

Bloating of the abdomen with air can also occur in the young as well as elderly people habitually towards the evening. This does not require any specific treatment. Simply lying down in a resting posture would suffice.

Treatment : Explaining to the patient the mechanism of production of gas in the abdomen as well as the reasons for passage of excess flatus goes a long way in relieving the anxiety of the patient. Other measures for reducing the gas production have

(Continued on page 34)

BOOKS

Exports for economic development

International Trade and Export Management by Francis Cherunilam; Himalaya Publishing House, Dr. Bhalerao Marg, Bombay .. Pages 463. Price Rs. 125.00

FOREIGN TRADE IS an important component of India's economic structure. Ever since the country launched economic planning, the parameters of import and export trade were intermeshed in the various targets of growth in our five year plans with a view to make foreign trade as not only an engine for economic growth but also as a substantial contributor to the development process. India's external policy is an attempt at making exports and imports as supporting factors for economic development. The policy is subjected to a continuous review both by the government and the concerned parties involved. Such a review helps in appraising the strong and the weak points for assessing what needs to be modified in the change environment, both internal and external. The exercise becomes useful for laying down trade policy on a sound footing.

The book under review is a well-brought out compendium on export trade and all that is covered under it. Export marketing has become challenging in the face of international competition, both from the developing and the developed world. Divided into three parts, the book discusses the various theoretical tenets of export trade and these are highly useful for getting a firm grip over them so that a sound export policy may be evolved and practised. The topics dealt with are the basis of international trade, gains from trade, terms of trade, balance of payments, trade barriers, foreign exchange and control, trading blocks and groupings, agreements, Eurodollar market and the international bodies functioning. Although these are subjects for a textbook but their inclusion has enhanced the value of the book. More so because the chapter on trading blocks gives updated material on the functioning of the various international organisations.

Over the years, India's trade with EEC countries has assumed greater significance. About 40 per cent of India's exports enter the EEC market duty free and 35 per cent of her exports are covered by the GSP. Since India's utilisation of duty free quota has not up to the mark, the demand for increasing the quota seems to be untenable. The author is of the view that "there is a tendency to exaggerate the protectionist threat and to overlook the opportunities available. In fact, but for the existence of the quota system, Indian exporters would have been driven out of the EEC markets by the more competitive countries of the Far East and by Brazil."

The second part of the book is concerned with foreign trade and commercial policy of India. In a

historical retrospect, there is a resume of India's foreign trade since 1951 along with an analysis of performance on export front. India has achieved considerable diversification in her exports, both product-wise and region-wise. The growth of engineering goods exports has been very spectacular, rising from 2 per cent in 1960-61 to about 15 per cent in 1983-84. Silver, gems and jewellery have recently emerged as important export earners for India. The export value of leather and leather manufactures went up by nearly three times in the last decade. Though there has been a significant growth in the export of non-traditional items, a number of traditional items continue to have considerable weightage in India's exports. In fact, even a marginal decline in their exports will cause substantial loss of foreign exchange. While manufactured products, machinery and transport equipment provide the core of our future exports, it would have been useful if the author had also dealt with the relevance and significance of agricultural exports in future. Topics like project exports, joint ventures, import substitution, etc., are more informative than analytical. There should have been a critical appraisal of performance in these areas.

The last part is devoted to export marketing management. There is an adequate description of the cybernetics of international marketing. As a marketing strategy, the produced has to care for modified communication about the product in foreign markets. The communication appeal used in the foreign markets would be quite different, depending on the particular product use that is promoted. As for pricing for export market the author argues that trade practices and regulations of overseas market must be accommodated. He prefers adoption of marginal costing for export price provided excess capacity exists.

The chapter on export finance gives a broad view of the various formalities to be observed with regard to the documents and procedures. A long-felt need of the export sector has been accomplished with the establishment of the Export-Import Bank in 1982. The book ends up with a number of appendices while bibliography and index are conspicuous by their absence. In sum, the last four financial years of the Eighties have witnessed an acceleration in the rate of growth of exports and a deceleration in the rate of growth in imports. The latest data show that the annual growth in the value of exports has been higher than the percentage growth of imports. In April-December, 1983 exports had 12.1 per cent increase and imports a mere 2.3 per cent. Earlier in 1980-81, our exports registered a 4.6 per cent increase and imports 3.7 per cent. It is clear that exports are rising faster than the rate of growth in the import bill and it is expected that the growth in 1983-84 will be the same as recorded in 1981-82 over the previous year viz., 16.2 per cent. One new development in foreign trade is the increasing awareness for boosting farm exports. Items of farm exports are being identified and concerted efforts are being made to create exportable surplus in agricultural products. The basic problem in increasing

agricultural exports is one of raising productivity and diversifying the commodity-mix. In view of the very low yields in our country, requisite investments in the agricultural sector must be made to increase productivity. A long-term export policy for agricultural products needs to be drawn and it should provide for creation of buffer stocks so that even during times of crop failure, the commitments already made for exports could be kept without disrupting our domestic supplies.

Despite international recession and protectionist policies, the country has become an important exporter of highly sophisticated manufactures all over the world. Now greater emphasis is being placed on maximising domestic value addition rather than exporting commodities in the form of raw materials or semi-finished goods. While a lot of improvement is being made in product-mix of agricultural and industrial sectors, perhaps India could also consider switching over to a judicious system of barter with other countries for boosting foreign trade and international cooperation. The country's natural endowments of land and manpower should be fully exploited to increase export of goods produced, particularly with labour-intensive technology. Imperatives of economic growth demand that exports need to be regarded as one of the highest national commitments by the Government and the business. Production alone is not enough; better productivity will have a crucial role to play.

Navin Chandra Joshi

Low cost books

Books for All at Low Cost ; National Book Trust, New Delhi ; PP. 111 ; Rs. 15.

TO ALL EXTENTS, a souvenir in royal-size 'get-up enshrining' complete report on the deliberations of an international Seminar held in New Delhi from 5th to 7th February, 1982, the volume under review offers a variegated set of write-ups relevant to its subject of "Books for all at low cost". The papers read by twelve dignitaries representing no less than nineteen countries of the developing as well as the developed world find befitting exposition in this book. They throw ample light on the international situation of book production from the angles of problems that arise, the difficulties that exist and the steps that are possible towards achievement of aims and objects for which the seminar was held.

The National Book Trust, India, as the votary and repository of book production at the national level, has had to its credit organised similar seminars during the last one decade. Coupled with the holding of World Book Fairs, almost every two years, under the good offices of the UNESCO, these endeavours of the Trust have gone a long way in eking out the best of the knowhow from the international book environs for improving its own image of performance. And in the larger interest of the nation its efforts have been of tremendous benefit in guiding the "Private Sector" to live up to the national need of books conforming to the economic conditions of the readers of all levels.

The volume deserves acclaim both for its contents and production qualities.

R. P. RAHI

(Continued from page 32)

already been mentioned and they include dietary manipulation, and a voluntary effort to avoid swallowing air.

There is a very poor correlation of the amount of air in the abdomen and the abdominal discomfort and bloating. The same amount of air can lead to discomfort to one individual while it may not bother in the least another person. The pain seems to be more because of abnormal contraction of the intestines rather than because of an excess of air.

The frequent observation that certain foods "turn to gas" in a patient may possibly be because of the tendency of these foods to stimulate abnormal motility of the gut rather than their ability to "gassify". Trapping of air in certain recesses of the gut, as mentioned above, are also results of abnormal contractions of the intestines.

Hence, one of the aims of the treatment should be to ensure normal bowel function and this can be best achieved by providing the individual a high fibre diet i.e. a diet with a fair amount of roughage. One of the best ways of providing roughage in the diet is by leaving the flour unrefined or unbleached, and perhaps by adding Isabgole (ispghula) in the diet. The roughage in the food improves intestinal motility and helps in proper stool formation and evacuation.

Drugs for relaxing the intestines or for reducing the spasm of the large intestines may also be helpful but should be used by the patients only with the advice of their treating physicians. There are certain popularly known drugs such as charcoal and simethicone which are known to absorb gas and have been recommended for treating flatulence. They are, however, of limited value because of the poor correlation mentioned above of the amount of gas and the patient's discomfort.

Lastly, physical exercise is of great help to the patients suffering from any form of turbulence. The jogging mania of the seventies if certainly good for both bowel and heart. In fact, the age old saying "after dinner rest a while and after supper walk a mile" should be modified now to "after dinner walk a mile and after supper twice the mile".

In the end, the following tips may be recommended for preventing the gas trouble.

1. Observing personal hygiene.
2. Maintaining normal bowel activity by taking adequate roughage in the diet (high fibre diet & Isabgole).
3. Avoid milk, very greasy food, and green leafy and root vegetable.
4. Avoid air swallowing, aerated beverages and constant chewing.
5. Avoid anxiety states.
6. Regular physical exercise. □

(Based on a public lecture at the All India Institute of Medical Sciences)

Principal items of export in 1983-84

PEARLS, PRECIOUS AND SEMI-PRECIOUS STONES have taken the lead in Indian exports by fetching Rs. 1,199.76 crores in 1983-84, according to the available preliminary data. In 1982-83, the exports of this group were valued at Rs. 768.08 crores and ranked number two in the list of highest exports.

Crude oil has taken the second position in the last financial year accounting for exports valued at Rs. 1,111.36 crores as compared to Rs. 1,023.29 crores in previous year. The third position has been taken by readymade garments which show a 21.8 per cent increase at Rs. 588.41 crores in 1983-84 compared to Rs. 483.21 crores in 1982-83. These commodities accounted for almost one-third of the total exports which are provisionally placed at Rs. 9,396.15 crores.

Tea has emerged as the largest single indigenous commodity accounting for a 37.4 per cent increase in 1983-84 for exports valued at Rs. 500.85 crores as compared to Rs. 364.62 crores during 1982-83. Machinery including transport equipment accounted for exports valued at Rs. 476.18 crores as against Rs. 582.13 crores in 1982-83.

Other commodities which did well include iron ore, leather and leather manufactures excluding foot-wear, fish crustaceans, molasses, cotton fabrics and chemical and allied products, handmade carpets, metal manufactures, cashew kernels, spices, works of art, and silk.□

Energy generation from non- conventional sources

THE VARIOUS PROGRAMMES for exploitation of non-conventional sources of energy in the country are likely to generate and save substantial quantities of energy by the end of the current year. By the end of the century, the expectation is that 20 per cent of all energy will be available from non-conventional sources.

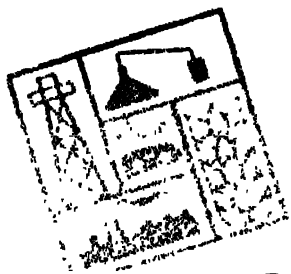
Growing concern for environmental protection and the rapidly increasing wastes resulting from population growth have lent urgency to the need for recycling of organic wastes. A few significant Research and Development projects have been undertaken like the one at Timarpur in Delhi where 3.745 MW of power will be generated from 300 tonnes per day of municipal solid waste.

A project is being taken up for generation of 6 MW of power from bagasse at a sugar mill in Tamil Nadu. Successful implementation of this project can lead to adoption of technology by other sugar factories resulting in generation of approximately 2000 MW power in the country from bagasse during the crushing season.

Projects for generation of biogas from sewage and production of electricity from biogas are operating at Padrauna in eastern Uttar Pradesh and in Patna.

Large sized biogas generation and utilization systems are being planned as part of the municipal sewage treatment, sludge digestion and utilisation of sludge and treated effluent for agricultural purposes in a large number of cities like Madras, Bangalore, Hyderabad, Vijayawada, Jaipur, Bhubaneswar, Calcutta, Bombay and Ahmedabad. A proposal has also been prepared for cleaning up wastes of the Ganga and Yamuna through setting up of sewage treatment-cum-biogas generation systems at Varanasi, Agra, Allahabad, Mathura, Kanpur, Hardwar, Vrindavan and Rishikesh. This will also help check the pollution of these rivers.

The programmes for transformation of agricultural residues into briquettes for cooking fuel or into power by using gasifiers are also being stepped up.



**Public sector:
different angle**

VOL. 28 NO. 19

OCTOBER 16-31, 1984 RUPEES 1.50

**Why sickness in
industry ?**

NEXT ISSUE

**Voluntary Agencies
Special**

THE INSTRUMENTATION LTD., a public sector undertaking at Kota, will manufacture advanced electronic control range. Designated as CONTRONIC-3, the system will be manufactured in collaboration with a West German firm.

The project, likely to be completed in two years, will primarily meet the growing requirement of thermal power stations where complex control functions are involved. This control package is also suitable for certain applications in steel and metallurgical industries, cement plants and nuclear power plants.

Instrumentation Ltd. commenced manufacture of a few types of electronic process control instruments at its Kota plant in October 1968 with technical know-how from the USSR. It subsequently diversified further in 1969 to cater to much wider range of instruments required by steel plants and thermal power stations. Pneumatic instruments were introduced in 1971 for process industry.

With the establishment of National Thermal Power Corporation and a major programme for setting up of super thermal power stations, the situation has been changing fast. I.I.K. has been able to some extent meet the stringent and complex technical specifications prescribed by the NTPC.

YOJANA

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Environment : Beyond pretty trees and tigers

Anil Agarwal

The environment is not just planting trees and protecting animals, threatened plants and ecosystems. It is the entity on which we subsist. Our entire agricultural and industrial development depends on it, says the eminent author.

IT LOOKS AS IF environment is an idea whose time has come. Newspapers give prominent display to environmental horror stories. Editorials demand better management of our natural resources. Government statements on the need to preserve the environment are now commonplace. Government programmes too are quite numerous and increasing in number day by day. There are massive schemes for afforestation, for instance. In the last four years, some 1000 crore seedlings are said to have been distributed or planted. There are new laws for control of air and water pollution and for the conservation of forests. India has received plaudits all over the world for what it has done to preserve tigers. Nearly three per cent of India's giant land mass is now under protected national parks and wildlife sanctuaries.

But there is a major problem with this entire range of activities and concerns; it does not appear to be based on a holistic understanding of the relationship between environment and the development process taking place in the country. The programmes are ad-hoc, without any sharp priority and there is too much of a policeman's attitude. They seem to be based on the belief that concern for the environment essentially means protecting and conserving it, partly from development programmes but

mainly from the people itself. There is little effort to modify the development process itself in a manner that will bring it in greater harmony with the needs of the people and with the need to maintain ecological balance, while increasing the productivity of our land, water and forest resources.

Life-giving entity

The environment is not just pretty trees and tigers, threatened plants and ecosystems. It is literally the entity on which we all subsist, and on which our entire agricultural and industrial development depends. Development can take place at the cost of the environment only up to a point. Development without a concern for the environment can only be development for the short-term. In the long term, it can only be anti-development and it can go on only at the cost of enormous human suffering, increased poverty and oppression. We may be rapidly approaching that point.

Amongst the hundreds of voluntary groups working at the microlevel within the country, there has been a remarkably rapid growth of interest in environmental problems. So rapid, in fact, has been this growth that sometimes we even loosely tend to describe it as the beginnings of an environmental movement in the country.

Environmental protection per se is of least concern to most of the groups. Their main concern is about the use of the environment : how should the environment be used and who should use it and benefit from it. It is this growing understanding of the relationship between the people and their environment, born out of a concern for a more equitable and sustainable use of the environment, that is probably the most fascinating development for a reporter of events like me.

Exploitation pattern

The pattern of environmental exploitation that we see on the global scale simply reproduces itself

Excerpts from an address delivered recently at the Indian Council of Social Research, New Delhi.

Yojana, October 16-31, 1984

as the industrial revolution did to the Western world, the Indian industry does to the Indian environment. Just to get an idea of how heavily independent modern industry is on the natural environment, it may be useful to point out that nearly half the industrial output in India is accounted for by industries which can be called biomass-based industries; that is, industries like cotton textiles, rayon, paper, plywood, rubber, soap, sugar, tobacco, jute, chocolate, food processing and packaging, and so on. Each of these industries exerts an enormous pressure on the country's cultivated and forest lands. They need crop lands, they need forests, and they need energy and irrigation.

The first lesson is, therefore, clear: the main source of environmental destruction in the world is the demand for natural resources generated by the consumption of the rich (whether they are rich nations or rich individuals and groups within nations) and because of their gargantuan appetite, it is their wastes mainly that contribute to the global pollution load.

Dependence on biomass

The second lesson, however, is that it is the poor that are affected the most by environmental destruction. The field experience of voluntary groups shows clearly that eradication of poverty in a country like India is simply not possible without the rational management of our environment and that conversely environmental destruction will only intensify poverty. The reason is simple though seldom recognised. The vast majority of the rural households meet their daily household needs through biomass or biomass-related products, which are mostly collected freely from the immediate environment. In short, they live within nothing other than a biomass-based, subsistence economy. Water is another crucial product for survival. Water is not biomass itself, but its availability is closely related to the level of biomass available in the surrounding environment.

The magnitude of India's dependence on biomass for meeting crucial household needs can be appreciated by looking at the energy situation. Over 50 per cent of the fuel consumption in India is for such a fundamental activity for survival as cooking. In developed countries, cooking consumes less than 10 per cent of total national fuel consumption.

But even more important for India is the fact that over 90 per cent of the cooking fuel in India is biomass: that is, firewood, cowdung and crop wastes. Even urban households are heavily dependent on firewood as fuel. Few people, energy planners and government officials alike, had any idea until recently of the dimensions of the rural-urban fuel-wood trade. Annual urban purchases of fuel wood are well over Rs. 500 crores in India.

Biomass resources not only meet crucial household needs but they also provide a range of raw materials for traditional occupations and crafts and are, hence,

a major source of employment. Firewood and cowdung are important sources of fuel for potters; bullock carts and catamarans are made from wood; bamboo is a vital raw material for basket weavers, and so on. Traditional crafts are not just being threatened by the introduction of modern products but also by the acute shortage of biomass-based raw materials.

Several reports from all over the country portray the extreme difficulty of hundreds of thousands of basket weavers in eking out a bare existence because of the acute shortage of bamboo.

Wood is now difficult to get for making even agricultural implements. Few people know that one of the things that led to the Chipko movement was the anger of the local people over the forest department's refusal to provide ash wood, wood that has been traditionally used for making ploughs, whereas the forest department happily allocated the same wood to sports goods manufacturers. Even biomass resources like thatch have become so difficult that maintenance and repair cycles of mud and thatch huts have increased considerably. Traditional mud roofs have almost disappeared from many parts of the country because of the large quantities of timber needed by them. They are being replaced by tiled roofs, but baking of tiles still requires large quantities of firewood.

Fodder is another vital resource that is in acute shortage. With only 2.45 per cent of the world's land mass, India supports 15 per cent of its cattle, 52 per cent of its buffaloes, and 15 per cent of its goats, and these animals play an extremely important role in the integrated system of agriculture and animal husbandry that Indian farmers practise. Shortage of fodder, especially from public lands, means, as a study from the tribal areas of Gujarat shows, that poor landless households and marginal farmers do not benefit much from the milk cooperatives and animal improvement schemes in the region.

In such a situation where millions of people are heavily dependent on biomass sources for their daily existence, the destruction of the environment that reduces access to biomass resources like the proposed forest bill will have an extremely adverse impact on the daily lives of the people.

Transformation of nature

Despite this near-total reliance on biomass resources for bare survival, nature in India has steadily undergone a major transformation. There are two major pressures operating on the country's natural resources today. The first, generated by population growth and thus increased household demand for biomass resources, has been widely talked about. The poor often get blamed for the destruction of the environment. But the second set of pressures, generated by modernisation, industrialisation and the general penetration of the cash economy, are seldom talked about, at least in policy making circles.

Modernisation affects nature in two ways. Firstly, it is extremely destructive of the environment in its search for cheap biomass-based raw materials and in its search for cheap opportunities for waste disposal. Unless there are strong laws which are equally strongly implemented, there is no attempt made to internalise environmental costs, both public and private industrialists prefer to pass them on to the society. State governments are also happy to give away large tracts of forests for a pittance and throw water pollution control laws to the winds to get a few more factories.

Other than the destruction of the environment, modernisation affects nature in yet another way : this is by steadily transforming the very character of nature. In physical terms, the tendency is to reduce the diversity in nature and transform it into a nature that is full of high-yielding monocultures. The ecological role of the original nature is also usually disregarded in this transformation. In social terms, the transformation is generally away from a nature that has traditionally come to support household and community needs and towards a nature that is geared to meet urban and industrial needs, a nature that is essentially cash generating.

Disastrous effect

The effect of this massive environmental change has been disastrous for the people, especially when we realise that in a country like India, whether on one hand we have an extremely high level of poverty and on the other a reasonably high level of population density, there is hardly any ecological space left in the physical environment which is not occupied by one human group or another for its sustenance. Now, if in the name of economic development, any human activity results in the destruction of an ecological space or in its transformation which benefits the more powerful groups in society, then inevitably those who were earlier dependent on that space will suffer. Development in this case leads to displacement and dispossession and will inevitably raise questions of social injustice and conflict. The experience of micro-level groups shows clearly again that it is rare to find a case in which environmental destruction does not go hand in hand with social injustice, almost like two sides of the same coin.

Let us look at a few cases of how the destruction of nature has affected the lives of people. In one very dramatic area where government policies have consistently increased conflicts is forests. The entire tribal population and millions of other forest dwelling people, depend on the forests for their very existence. Destruction of forests has meant social, cultural and economic destruction of the tribal populations in particular.

Yet another major component of the country's physical environment is grazing lands. The destruction of the grazing lands has meant enormous hardships for poor people, especially for the nomadic groups in the country. Few people know that India has nearly 200 castes engaged in pastoral nomadism, which when added up number upto six per cent of

India's population. India is unique in the terms of the diversity of animals associated with pastoral nomadism.

A number of factors, including land reforms and development programmes which have promoted expansion of agriculture on to marginal lands, have steadily led to an erosion of grazing lands. The Rajasthan Canal is a fine example of a government programme that has transformed extensive grazing lands into agricultural lands. No effort was made by the government to ensure that the nomads who used these grazing lands earlier would benefit from the canal on a priority basis.

Riverine fisherfolk constitute another group that has suffered immensely with environmental destruction. Riverine fisheries are being seriously affected with increasing water pollution. Large scale fish kills are regularly reported. Rivers have now become a resource for urban and industrial India to be used as cheap dumpyards for their wastes and all this is sanctioned in the name of economic development.

People's protests

The new, commercial nature that is being created is also of little help to village communities and their daily needs. There are people's protests in many parts of the country against the conversion of oak forests into pine forests and of sal forests into teak forests. Neither pine nor teak is of any interest to local communities. In the Singhbhum area of Bihar there is even a movement to destroy the new teak forests. Equally, there is a strong protest in Karnataka against the planting of eucalyptus on farmers fields.

The planting of eucalyptus on farmers fields and even on so-called barren fields is an excellent example of the adverse biomass conversion, adverse to the people, promoted by modernisation. What happens to the poor people when eucalyptus is planted on farmers field ? We have a concrete example from a village in Punjab, where a rich farmer, with over 100 hectares of land and a former Governor, has stopped growing cotton and has switched to eucalyptus. As long as he grew cotton, enormous quantities of cotton sticks would be available for the landless labourers in the village to use as fuel. Because of the shortage of firewood, crop wastes from the landlords' fields are the major and almost the only source of fuel for these poor landless villagers. Now with eucalyptus growing, their main source of fuel has dried up, putting them in a precarious position. This is a case of where afforestation has actually created a fuel famine for the neediest community.

What happens when eucalyptus is grown on a barren piece of land ? Usually no land is barren unless, of course, it is highly eroded in which case even eucalyptus cannot be grown on it. Generally barren lands have large quantities of weeds growing on them. With the destruction of our original vegetation, a few aggressive weeds like Lantana, Parthenium and Imomea have literally started taking over the country. None of these weeds are palatable to

animals and they therefore survive the pressure of grazing.

If we look at the firewood statistics in the country, we find there is a huge gaping hole in these statistics. The officially produced firewood does not account for even one-fifth of the total estimated demand of some 130 million tonnes of firewood a year. When this was first discovered in early 1970, it was immediately concluded that the rural people must be stealing wood from the forests on an enormous scale. Later, however, it was found that over three-quarters of the fuel used in the rural areas is in the form of twigs and little branches and there need not be any felling of trees to get this wood. But even today we do not know what vegetation is actually providing this massive quantity of twigs and branches. My guess is that weeds are now playing an extremely important role in the vital supply of cooking fuel for the poor.

Thus when a patch of barren land is planted with eucalyptus, even the weeds are no longer available to poor, landless households and their fuel crisis intensifies. Not surprisingly foresters report from all over the country, in the form of a complaint, that women even take away dry eucalyptus leaves from eucalyptus plantations for use as fuel, thus, destroying, as the foresters say, any chance of the leaves breaking down into humus and enriching the soil. But what else can these energy-starved women do?

Thus what we see in India today is growing conflict over the use of natural resources and, in particular, over biomass between the two sectors of the country's economy: the cash economy or the modern sector on one hand and the non-monetised biomass-based subsistence economy, the traditional sector on the other.

Burden on women

The destruction of the environment clearly poses the biggest threat to marginal cultures and occupations like that of tribals, nomads and fisherfolk which have always been heavily dependent on their immediate environment for their survival. But the maximum impact of the destruction of biomass sources is on women.

Given the culturally accepted division of labour within the family, the collection of household needs like fuel, fodder and water is left to women. As the environment degrades, and this becomes increasingly difficult to obtain, women have to spend an extraordinary amount of time for foraging for fuel, fodder and water in addition to household work, agricultural work and caring for animals. The worst situation is in the arid and semi-arid parts of the country and in the hill and mountain villages. In all these areas trees and forests have been steadily destroyed. The women here can spend as much as five to six hours everyday, in some households as much as ten hours everyday, just collecting fuel and fodder. On the contrary, in a state like Kerala, where ecoclimatic conditions permit a rich green cover, the

work burden on women is much smaller—probably the least in the country.

Cash economy

The penetration of the cash economy is affecting the relationship between the men and women in a peculiar way and is creating a real dichotomy in the respective relationships with nature. Men have become more involved with the cash economy than women. Women continue to deal with non-monetised, biomass-based subsistence economy of the household. Even within the same household, we can find cases of men happy to destroy nature to earn cash even though it would create greater hardships for the women in collecting daily fuel and fodder needs.

The Chipko Movement has given us numerous examples of this dichotomy in male-female interests, and the role of the women in preventing deforestation has been paramount in the movement. Even though many crucial household needs could be met by rehabilitating the local village ecosystem—by planting fuel and fodder trees, for instance—the men do not show any interest in doing so. It is women who are doing all the afforestation work organised by the Chipko Movement.

The new culture created by the penetration of the cash economy has slowly but steadily, psychologically alienated the men from their ecosystem. Employment for them means work which can bring cash in their hands. This employment can be found mainly in the city and, hence, mass male migration. Even when the men are in a village a job is still something that must earn cash.

It is not surprising that the eucalyptus based social forestry, trotted out to be such a great success by the World Bank and the forest departments, is all in the hands of men, all planting trees with the cash motive. Other than employing women as cheap labour in nurseries, these agencies have nothing to show in terms of involvement of women—the very people who deal with fuel and fodder and the government too still gives this the name of Social Forestry. But may be this should not be surprising. Making a fast buck, even at the expense of society and ecology, is probably the most social thing we can do in a cash economy.

Because of the increasing intensity of floods, there has been considerable talk in recent years about integrated watershed management in the Himalayas and in the Ghats. The Himalayas are being described as one of the most threatened ecosystems in the world, which in turn determines the fate of several hundred million people in the Indo-Gangetic plains. But if any action for ecological reconstruction has to be taken in the hills, it cannot be done without the involvement of women.

Fortunately, the experience of the Chipko Movement shows that women in these parts, despite their 14-16 hour back-breaking work schedule, are extremely keen to participate in such work, especially in

(Contd. on page 27)

Currency and exchange profile before Independence

S. K. Ray

The evolution of the currency system in British India had overall suited the pattern of British requirements. This by and large revolved around the considerations of home charges and the opposition of the Treasury of England to the creation of an independent gold reserve for India.

THE GOLD STANDARD, which is essentially linked to the creation and maintenance of a gold bullion reserve, was never really given a trial in the Indian context. The British Government had apparently considered it more expedient to link the currency system to the British sterling which in turn was linked to the gold standard. Indian currency was thus made subservient to the British currency. It was as a result of this imperialist manoeuvre that a currency system known as the gold exchange standard came into being around 1900.

It was maintained by the Government that the gold exchange standard introduced in India with the advent of the twentieth century was the outcome of the implementation of the well-considered recommendations on currency reform made by the Herschell committee 1892 and the Fowler Committee 1898. That it was in reality not so was hinted at even by Keynes himself.¹

1. Keynes described the essentials of the gold exchange standard as the use of a local currency mainly not of gold, some degree of unwillingness to supply gold locally in exchange for the local currency but a high degree of willingness to sell foreign exchange for payment in local currency at a certain maximum rate and to use foreign credits in order to do this.

Both the Herschell and Fowler Committees had recommended that the Indian currency should be salvaged from the ill-effects of bimetallism and linked to a full-fledged gold standard.

Even though the gold exchange standard was patterned to suit the interests of exports of Indian raw materials to Britain and import of British manufactures to India, a kind of stability in the foreign exchange counter was achieved.

Chamberlain commission

Very soon the Government had backed up even a theoretical support for the gold exchange standard. The Chamberlain Commission in 1913 reviewed the existing currency and exchange practices in India, and pronounced on the advisability of introducing a gold standard with a gold currency.

On their recommendations certain palliative measures were adopted 'to improve upon the present working of the gold exchange standard'. The gold exchange reserve, instead of being entirely invested in London, came to be held in actual gold to the extent of at least 50 per cent, and of the remaining 50 per cent also largely in easily convertible securities.

The First World War had brought about many disturbances in the currency and exchange situation in India. There were pronounced difficulties in the minting of silver rupees and coins.

Another committee

The Babbington-Smith Committee 1920 was appointed to advise the Government on the stabilisation of the Indian rupee. The Committee had considered it advisable 'to link the rupee directly to gold rather than to sterling which was itself depressing.

The Government accepted the recommendation but grudgingly, and the rupee was statutorily declared equivalent to 2s gold, and sovereigns were declared legal tender at Rs. 10 each.²

In the twenties however in line with the world trend the post-war trading boom soon spent its force. Exports from India sharply declined vis-a-vis imports into India which had sharply increased, with a consequent pressure on the monetary remittances to Great Britain.

Masterly inaction

To restore the strength of the rupee, a number of restrictive measures were adopted. Thus the currency base was contracted; the discount rate was raised, sale of council bills remained suspended until 1924-25, when for remittances from India to Britain purchase of sterling in India and sale of council bills in London were both resumed.

It was at this stage that the Government considered it wise to take a fresh look into the entire issue of Indian currency and exchange system. In fact the five-year period (1921 to 1925) was marked by indecisions. The policy of drift, labelled as a policy of masterly inactivity, led to deleterious consequences.

The end of the policy of masterly inactivity was now in sight. The Government of India in response to repeated pressures from various quarters set up in August 1925 a Royal Commission on Indian Currency and Exchange under the presidency of Commander Hilton-Young.

Hilton-Young commission

After examining various alternatives, the Hilton-Young Commission decided in favour of a gold bullion standard as the future monetary system for India. The basic recommendations were : A gold bullion standard should replace gold exchange standard, 'the linkage to gold' would be provided 'by making the currency directly convertible to gold,' and this would be arranged in a 'conspicuously visible' manner² one-rupee notes would be resumed, and minting of rupee coins given up, gradually the rupee coinage being shrunk and 'eventually redeemed in gold.'

The Government accepted the recommendations of the Hilton-Young Commission, and in matters relating to currency and exchange, the Finance Minister Basil Blackett moved a bill in March 1927.

There were mainly two planks on which the Report of the Hilton-Young Commission, the Basil Blackett Bill, and the 1927 Currency Act were criticised. Firstly, the Government was out to artificially raise the exchange rate to favour the pound sterling vis-a-vis the Indian rupee. Secondly, the intention was to promote the interests of British trade and industry rather than the development of the Indian economy.

2. Apart from liberal buying and selling of gold by the Treasury, the Government proposed to issue Savings Certificates redeemable in 3 or 5 years in Legal tender money or in gold at the option of the holder.

There was yet another snag. Since the Government had the option of giving sterling and not gold, the standard thus established continued to remain a sterling exchange standard, more so after September 1931 when sterling was no more at par with gold.

Britain left the gold standard in September 1931. The Government of India also abandoned the gold linkages of the rupee, and began to deal only in sterling to keep the rupee-sterling rate at Re. 1=1s 6d. Once again the currency standard in India became a sterling exchange standard. This had resulted, in accordance with the British design, in a reckless flight of gold from India into England, depleting India's gold stock by nearly 36 million ounces (worth well over Rs. 300 crores at currency prices) during 1931-37.

Sterling balances

The Second World War witnessed three tell-tale developments in the shape of an inflation fevered by war-expenditure; a burgeoning rise in sterling balances; and an emergence of exchange control.

The portents of the economy in matters relating to currency and exchange in the decades leading to independence can be briefly indicated. The rupee-sterling linkage came handy with the British Government to finance the war account in India by simply transferring sterling securities to the Government of India's account at the Bank of England. Finally, on the security of these blocked sterling balances in Britain, the issue of additional rupee (paper) currency was authorised in India.

During the World War feverish exports of raw materials to Great Britain gave India a favourable trade balance. This, however, led the Reserve Bank of India to purchase more sterling than it sold, and to further accumulate an already growing sterling balance.

By December 1946 the sterling securities held with the Issue Department had risen to Rs. 1,135.32 crores, and by the Banking Department to Rs. 485.76 crores.

The unbridled expansion of paper currency on the strength of sterling balances fed fuel to the fire of inflation. This is reflected in Table 1.

TABLE 1
Sterling balances and note issue

Year	Sterling balances	Note issue (September)	Price level (August)
1939	64	176	100
1941	169	241	143
1943	394	513	238
1945	1,182	969	244

Source Annual Reports on Currency and Finance, Reserve Bank of India.

Inflationary spiral

Rigorous exchange control measures were adopted by the Government during the World War through the Reserve Bank of India. These measures were applied not only in relation to foreign exchange supplies and remittances, but over almost the entire export portfolio. As a result during the World War, inflation had been restrained on a relatively low key, also helped by the wanton shortage of consumer goods, even necessities, diverted to war requirements and hoarded in the folds of the black market.

But it spiralled sharply upward in the post-war years, when exchange control measures were hastily withdrawn, indexation of consumer goods had by and large ended, and there were sprees of feverish spending of accumulated sterling balances by the Government.

With the advent of independence, there were firstly the compulsions of refugee rehabilitation and post-war reconstruction, and secondly those of developmental expenditure under the Five Year Plans from 1951 onwards and undertaken before the fever of post-war inflation could be effectively extinguished.

An appraisal

It is now abundantly clear that at no stage had the interests of the indigenous economy bothered the alien Government overmuch in their attempts at currency reforms in India. The primary and overwhelming consideration has always been the protection of British interests in both India and England.

The age-old strategy of setting up Committees and Commissions was liberally practised by the British Government, either in formalising currency and exchange measures oriented to imperial preferences, or in diverting and confusing critical or adverse public opinion. This has been done over and over again, and even when such Committees or commissions included renowned British or Indian economists or financiers, the basic objectives of the British Government were never lost sight of. Very often forthright views of such members as Purshottamdas Thakurdas or Ardeshir Dalal were altogether ignored or sidetracked.

The gold exchange standard, championed in the early twentieth century as a panacea for the ailments of the Indian currency system, had in fact bristled with many ailments.

It was an unflinching effort by the British Government to pitch the rupee-sterling relationship at a ratio that would suit the interests of the British Government. The interests of Indian economic development ranked only a poor second. This policy had naturally led the British rulers to opt for a higher sterling value for the rupee after the First

World War. This had led India to run up huge losses of hard-earned sterling in the immediate post-war period.

The British Government's continuous refrain however had been that the rupee's link with sterling was a source of strength.

But even this bubble of concern for the Indian economy was pricked during the Second World War. The sterling connection for the Indian rupee being a source of strength proved to be an altogether false propaganda. It led to two adverse consequences.

Firstly, by putting the rupee-sterling link to their own advantage, the British Government had made India grant the former a huge sterling loan of over Rs. 1,600 crores, and had thereupon prevented the use of sterling balances for India's own economic development by blocking their release during the war years, thereafter agreeing to release them only in trickles.

Secondly, the link with sterling was also used or rather abused by the British Government to create a large expansion of paper currency in India on a narrow base of gold. This strategy had germinated seeds of a run-away inflation in the post-war years.

It was clear to contemporary public opinion that the currency and exchange policy pursued by the British Government 'was not intended to provide India with reasonably elastic monetary system maintaining over the years a stable currency standard of stable values'.

It was tilted in favour of British payments to India, by undervaluing the debt burden by currency gimmicks, and also by deferring such payments under one pretext or the other, investing the capital during the interregnum in Great Britain, and allowing India to draw only a pittance of interest, if at all.

Increase in export of basic chemicals

EXPORTS OF BASIC CHEMICALS, pharmaceuticals and cosmetics increased to Rs. 126.34 crores against a prorata target of Rs. 103.75 crores during the first quarter of the current financial year. The items include drugs, pharmaceuticals, dyes, intermediates, alcohol and coal tar chemicals, basic inorganic and organic chemicals, glycerine, soaps, detergents, cosmetics and toiletries, agarbattis, essential oils, crude drugs and naphtha.

The exports during the corresponding period of the last year (1983-84) stood at Rs. 71.55 crores. The export target for the year 1984-85 has been fixed at Rs. 415 crores.

The total exports during 1983-84, valued at Rs. 411.88 crores exceeded the target fixed at Rs. 350 crores as against an achievement of Rs. 307.81 crores in 1982-83.

During the current year the actual exports have exceeded the prorata targets in almost all cases of items in different panels.

Basic issues guiding Seventh Plan

—Yojana Correspondents

THE POPULATION BELOW THE POVERTY LINE would be reduced substantially through productive employment, among other measures, by the end of the Seventh Plan, as part of the long-term perspective of reducing the national poverty level to around 10 per cent of the population by 1994-95. This was stated by Shri Mohammed Fazal, Member, Planning Commission, while inaugurating a Seminar on Basic Issues relating to the Seventh Plan held recently in New Delhi.

The Member said a vigorous efforts will be made to raise the literacy level of the people besides bridging the gap in the provision of health, nutritional and water supply services.

• He explained the broad objectives of the Seventh Plan would focus on Food, Work and Productivity as outlined in the Approach paper. The provision of productive employment would be the major objective combined with a significant reduction in poverty. This was sought to be achieved through accelerated growth of labour absorbing agricultural and rural development and of food production in particular. It would entail a thrust for developing these sectors, as also that support them, e.g., irrigation and command area development, power, fertilizers and relevant industry.

Industrial strategy

Shri Fazal said that the industrial strategy would be based on adequate infrastructure development, incorporating the "growth centre" concept and "nucleus plant" approach, together with initiatives for increased ancillarisation. The policy framework would also involve dispersal of industry away from urban concentrations.

In addition to productivity, effective programmes would be undertaken to improve quality in production in all sectors of the economy, as also for modernisation, and efficient maintenance of assets. Productivity of industry would be enhanced with

utilisation of full capacity in order to stem the adverse impact on the process of growth. Though massive investments had been made in every plan, it had not been possible to achieve maximum productivity from the investments made in agriculture, textiles, cement, copper, aluminium, zinc, irrigation, power steel, coal, transport and other industry, he added.

"An increase in productivity and output in industry would have a cascading effect on all users and industries, leading to considerable increase in production and productivity, and eliminate the present price-cost regime where inefficient management is permanently subjecting the hapless consumer to pass-on high cost levels," he said.

Calling for separating the true industrialist from the trader-cum-speculator in industry, he said, in sugar, textiles, paper, cement, drugs and pharmaceuticals, automobiles and automotive tyres and ancillaries, hydrogenated vegetable oils, soaps and detergents, footwear and manufactured food products where the private sector was dominant, high prices and cost regime prevailed where a seller's market seemed to rule permanently. To put an end to this situation, an adequate utilisation of installed capacity alone would be enough to eliminate high prices charged and the need for imports.

Second industrial revolution

Shri Fazal called for a second industrial revolution based on elimination of inefficient units, technological upgradation by making a quantum jump to state-of-the-art technology (imported where necessary) applied in economical-sized industrial units, producing goods at world scale levels of finish, sophistication, reliability and costs. The discipline of the market required *prima facie* enough supply by numerous producers to prevent price fixing by a few.

"Public enterprises would also have to generate surpluses which would take care of as much of their own capital requirements as was possible at norma-

tive efficiency levels. Such a drive for industrial efficiency across the board would generate funds for investment in industry", he said. Emphasising the need for substantial reduction in costs and tune-over-runs, he said, the Government was determined to enforce accountability in public sector.

Lower capital cost

Explaining the case for a lower capital and revenue cost, Shri Fazal said India had a very cheap labour force as also managerial overheads, which might not be more than 10 to 12 per cent as compared to what existed in a highly developed country. Measures would have to be taken to establish a low cost economy in the country.

Talking of investment pattern in the Seventh Plan Shri Fazal said, a policy of strict selectivity in choosing new programmes and projects for public sector investment having regard to the availability of resources and ensuring continuous adequate funding of projects, especially those which were essential for growth, self-reliance and modernisation or productivity, would have to be followed.

Productive employment

Shri Fazal emphasised the importance of productive employment in the next plan and said, "Instead of relying on general economic growth for raising employment opportunities without any special effort to give employment orientation to this growth, it was necessary to treat employment as a direct focal point of policy. However, employment could be sustained only if it was productive and added to output and incomes on a continuing basis. Hence, strategy to generate productive employment". In this connection, he said, the potential of the industrial sector in generating employment could not be minimised.

He pointed out that the growth pattern of employment would be re-structured with income-generation for the poor. "The implications of this would mean that capital intensive new-starts in non-essential areas, i. e. those not connected to food, work and productivity would not be part of plan outlay in the public sector nor would such projects enjoy preferential support from the public financial institution," he added.

Shri Fazal emphasised the need for conservation of energy by industrial sector and said, "management of the energy sector was a key task for the Seventh Plan and beyond. The major task was to reduce the rate of growth of energy consumption in relation to GDP growth; to substitute coal and electricity for oil through appropriate technologies, and to manage supply and demand by suitable price and tax policies".

Size, dimensions and targets

Detailing the broad physical dimensions, size and targets of the plan he said, "the Seventh Plan aims at a GDP growth rate of a little over 5 per cent per annum. The annual growth rate envisaged was 4 per cent for agriculture, with food production being

at five per cent, while a seven per cent growth rate was slated for industry. The growth rate of population has been assumed at 1.8 per cent per annum. Over the five years, aggregate investment at 1984-85 prices would be of the order of Rs. 320,000 crores of which the public sector outlay would be Rs. 180,000 crores, the investment component of this being Rs. 150,000 crores, or approximately 47 per cent of the total Plan investment."

"Poor production by the end of the Seventh Plan would be around 188 million tonnes, against a base figure of 150-151 million tonnes in 1984-85. Electricity generation was expected to grow from around 165 billion Kwh at the end of the Sixth plan to 270 billion Kwh in the terminal year of the Seventh Plan. Substantial increases were also proposed in the production of basic goods which contributed to the strength and performance of the economy like steel, where a level of production of around 13 million tonnes was expected by the end of the Seventh Plan, production of cement was expected to be around 48-50 million tonnes in 1989-90. Originating railway freight was expected to be 375 million tonnes at the end of the Seventh Plan as compared to 275 million tonnes at the end of the Sixth Plan. Crude oil production was expected to go up to more than 35 million tonnes; and a substantial step up in the production of fertilizers was also envisaged," he said. □

Outlay for plant protection

THE 12th ALL-INDIA Plant Protection Conference, which met in New Delhi last month has recommended that at least 5 per cent of the outlay on agriculture and allied sectors in the Seventh Plan should be earmarked for plant protection. It has also suggested that a massive training programme should be launched in the country for the pesticides dealers and farmers.

The Conference also recommended that the capacity for analysing samples in the States should be augmented manifold and the laboratories properly equipped manned by a trained staff. It wanted States to enforce the provisions of the law in the matter of quality control right from the stage of manufacturing to the ultimate use in the fields.

Readers' Forum

YOJANA solicits views of readers on articles published in it. It also invites them to express their views on various current, social and economic issues. The letters should not exceed 200 words.

—Editor

TOWARDS SOCIAL REVOLUTION

a Case for Economic Democracy -

VASANT SATHE

A Serialisation 8

The economic system

Monstrous growth of black money

ALONG WITH THE FOREGOING FIGURES, let us also now consider the growth of what is called the 'parallel economy' or the wealth which has escaped being accounted for towards revenue and which has remained in the hands of those who have accumulated and have also used the same. The first effort towards estimating the amount of black money was made by the Wanchoo Committee also called the Direct Taxes Enquiry Committee (1971). It said :

Even after taking all these limitations into account and after making rough adjustments on the basis of information available, the estimated income on which tax has been evaded would probably be Rs. 700 crores and Rs. 1000 crores for the years 1961-62 and 1965-66 respectively. Projecting this estimate further to 1968-69 on the basis of the percentage of increase in the national income from 1961-62 to 1968-69 (during which period the national income increased nearly by 100 per cent at current prices), the income on which tax was evaded for 1968-69 can be estimated at a figure of Rs. 1,400 crores. As regards the extent of tax evasion we find that the average rate of tax on the income assessed for 1965-66 was around 25 per cent. But considering that the size of the problem of black money and tax evasion has grown over the years and tax evasion is more widely practised at higher levels of income, it would be appropriate to adopt the rate of tax applicable to evaded income at not less than 33-1/3 per cent for 1968-69. On the basis, the extent of income tax evaded during 1968-69 would be of the order of Rs. 470 crores, being one-third of Rs. 1,400 crores. The money value of deals involving black income may, therefore, be not less than Rs. 7,000 crores for 1968-69. We would, however, wish to emphasise that the amount of tax-evaded income for the year 1968-69 is only a guesstimate based on certain assumptions about which substantial difference of opinion exists for want of adequate data. In addition, we would also like to dispel a possible impression that the tax-evaded income is all lying hoarded which can be seized by the authorities; much of it has been either converted into assets or spent away in consumption or else is in circulation in undisclosed business dealings.

The multiplicity of avenues in which black money in the country gets channelised is matched only by

the ingenuity of the devices through which it is earned. It is found widely used for conducting business transactions in "Account No. 2", smuggling of gold, diamonds and luxury articles, indulging in unauthorised transactions involving foreign currency and purchasing scarce commodities for the purpose of hoarding, speculation, profiteering and black-marketing. It is also spent in purchasing illegally quotas and licences at premia, financing secret commissions, bribes, litigations, etc., giving "on-money" in business transactions, buying industrial peace, financing election expenses and giving donations to political parties. Black money is also utilised in call deposits, bogus hundi loans, acquisition of movable and immovable assets, for example, jewellery, tax-free government securities, deposits in Indian and foreign banks in "ghost" or benami names, often with "on-money" payments. Now, infrequently contributions to charity in anonymous and pseudonymous names also come out of black money. Behind the vulgar display of wealth which is evidenced by ostentatious living and lavish expenditure on weddings, festivals, etc., is this scourge of black money.

A recent study on black money and 'transactions unreported' puts the figure of black money at Rs. 46,866.8 crores for the year 1978-79 and its percentage to official Gross National Product (GNP) at 48.8 per cent. Table 3.3 illustrates the monstrous growth of black money.

Table 3.3 Size of black money

Year	Size of black money (Rs. crores)	Percentage of black money to official GNP
1967-68	3,034.4	9.5
1972-73	15,195.5	31.8
1973-74	15,894.9	27.0
1974-75	14,518.1	20.8
1975-76	18,457.9	25.4
1976-77	30,014.2	39.4
1977-78	34,335.2	39.5
1978-79	46,866.8	48.8

On the basis of the foregoing data, the estimated black money figure for 1981-82 is Rs. 54,000 crores.

Much of the black money is also kept in the banks, including nationalised banks, in fictitious, benami accounts. This is often done with an understanding between the banker and the individual. After all, banks also want to show an increase in their deposits. Then, these very deposits are utilised for borrowing legitimate money from the bank. Thus, in effect, black money is used to draw out the white money, further helping the growth of the black or the unaccounted income. There are many other dubious methods of generating incomes from black money, such as chit funds and various forms of gambling.

A recent evidence of how banking facilities are freely used by the black market operators came to light in the Supreme Court concerning the case of Sanchaita Investments. The Economic and Political Weekly reported that : "A search of the residence of one of the partners of Sanchaita resulted in the seizure of, among other things a passbook of the Gariahat branch of Syndicate Bank in Calcutta, in a fictitious name showing Rs. 28 crores to the credit of the account." (13 February 1982, p. 213). The Chief Justice of the Supreme Court, Y. V. Chandrachud observed : "The partners of the firm have become millionaires overnight. Clerks and chemists that they and some of their agents were in 1975, today they own properties which will put a prince to shame. 'Rags to riches' is how one may justly describe the story of quick and easy enrichment. There is no question that this vast wealth has been acquired by the firm by generating and circulating black money. "(Ibid)." The company offered interest rate of 48 per cent per annum and made generous contributions to the dominant party in the country."

Reverting to legitimate economy, according to the figures of income tax assessments for the year 1979-80, those whose income is above Rs. 1000 per month would come to approximately about 20 lakhs. Even presuming that a large number of people have not disclosed their real income and have not even come within the purview of taxation this figure could not exceed its doubled number and, hypothetically, one could even put the figure at around 40 lakhs, that is, about four million people in a population of 700 million. Considering that, after eliminating children and non-working women and men, the work force in the country is found to be a little below 50 per cent of the population, i.e., about 350 million, the income tax paying population is only around one per cent of the work force. It will then be clear that the real consumer market of goods that one sees flooded in urban pockets in the major metropolitan centres is for this restricted section of the population. It is in this context that the impact and the influence

of the unaccounted black money can be understood. Obviously, whereas the GNP is distributed over the entire population in terms of the economic activity, the fact that an amount equivalent to nearly 50 per cent is in the hands of only a few hundred thousand and is circulated or distributed mainly at the decision-making points or points of social service and even then there is enough surplus to be spent on ostentatious non-essential luxuries shows that the entire five-star culture and the flagrant display of wealth are the outcome of this unaccounted wealth. It has virtually got a stranglehold on the entire economy, nay, the entire life and the value system of the society.

This, in a nutshell, is the economic system that has emerged out of three decades of planning. However, it is necessary to look at the other side of the coin, i.e., the achievements of planning, especially those of the public sector undertakings as a crucial segment of India's economic system in which is invested the public's money.

The public sector

Full allowance should be made for the fact that industries in the public sector are those which require longer gestation periods and have not only to provide for the basic infrastructural needs but also make substantial investments in human welfare activities like providing housing facilities to its employees. Even an efficient management of any sector must conform to certain well-accepted parameters and must, at least over a period, show a fair return on investment. Somehow, industries in the public sector have developed a feeling that they have been absolved from the requirements of showing results according to reasonable norms, and that, being in the public sector, they were like the 'holy cow', immune to any criticism. As a result, even the elementary norms of an industrial activity, such as, cost-output ratio, the ratio of variables to non-variables, the ratio of inventories and their accumulation, the time over-run bringing in escalation of costs the heavy spending on overheads, lack of planning in securing the proper quality of equipment, inadequate arrangements to secure power supply and essential raw materials—these well-known elementary parameters have been grossly neglected in the public sector. If we take the total profits as percentage of the total investment we will see that the return has been negligible.

The total investment in the 187 Central Public Sector undertakings up to 1981-82 amounted to Rs. 21,865 crores and is estimated to be nearly Rs. 25,000 crores at the beginning of 1982-83. Table 3.4 shows the capital investment in these undertakings over the last five years and the turnover and profit or loss from all these undertakings as a whole :

Table 3.4 Profile of public sector enterprises**(Rs. crores)**

Item	1977-78	1978-79	1979-80	1980-81	1981-82
Number of running public enterprises	155	159	169	168	187
Capital employed	12,065	13,969	16,182	18,207	21,865
Turnover	18,020	19,061	23,290	28,635	36,443
Gross profit before interest and tax	915	1,071	1,229	1,418	2,675
Net profit before tax	160	185	225	19	1,074
Net profit after tax	-91	-40	-74	-203	485
Internal resources generated	708	906	1,030	1,225	2,249
% of gross profit to capital employed	7.6	7.7	7.6	7.8	12.2
% of net profit before tax to capital employed		—			4.9
Employment (lakhs)	16.38	17.03	17.75	18.38	19.02

Source : Economic Survey 1982-83, p.49, Ministry of Finance, Government of India, New Delhi

Table 3.5 shows the corresponding profile of private sector companies over the years 1977-78 to 1980-81

Table 3.5 Profile of private sector enterprises**(Rs. crores)**

Item	1977-78	1978-79	1979-80	1980-81
Number of private sector enterprises	421	426	433	433
Capital employed	7,222	7,843	8,702	9,860
Turnover	11,161	12,402	14,145	16,656
Gross profits before interest and tax	1,102	1,283	1,537	1,702
Net profit before tax	744	894	1,121	1,198
Net profit after tax	349	453	597	692
Internal resources generated	531	643	818	949
% of gross profit to capital employed	15.3	16.4	17.7	17.3
% of net profit before tax to capital employed	—	—	—	12.1
Employment	N.A.	N.A.	N.A.	N.A.

Source : RBI Bulletins, June 1979, July 1980, October 1981 and August 1982.

It will be seen that during the year 1981-82, the public sector undertakings earned a net profit of Rs. 485 crores after incurring net losses for the previous years. The trend is no doubt encouraging, but when we compare this performance with the total investment made in these undertakings so far, i.e. Rs. 21,865 crores, the net profit after tax for the year 1981-82 represents a return of 2.22 per cent only. Here also if we exclude the fortuitous profit of 11 petroleum sector companies, which was Rs. 588 crores for the same year there is hardly any profit at all from the remaining public sector units.

The public sector enterprises however account for 12 per cent of the total labour force in the entire economy, 3 per cent of total GNP and about one-fifth of the GNP originating from the entire public sector in the country. The number of public sector enterprises increased from 120 in 1973-74 to 187 in 1981-82 and gross fixed assets of these enterprises grew by 18 per cent per annum. The overall industrial production increased by 5 per cent per annum during this period. Petroleum units which account for one-third of the total sales turnover of all enterprises recorded 16 per cent sales growth during this period and this accounts for the general average of 5 per cent although many of the other units are suffering losses.

However the profitability of Central Government enterprises shows a declining trend. A comparative picture regarding the return of investment in public sector and large private sector companies is presented in Table 3.6. This table shows that the return on investment in public undertakings is less than that in large private sector companies. During 1977-78 to 1979-80, return on investment in public undertakings declined sharply while in private companies it increased rapidly during the same period.

Table 3.6

Return on investment in public and private sector companies.

Net profit after tax as percentage of shareholders' funds (share capital + reserves)

Year	Central Government non-departmental and commercial undertakings (per cent)	Large private sector companies (per cent)
1973-76	2.6	8.2
1976-77	3.2	7.9
1977-78	-14.0	8.8
1978-79	-0.6	12.6
1979-80	-0.9	14.1

Source : Public Sector in the Indian Economy, Centre for Monitoring Indian Economy, August 1981.

In order to get a proper assessment of the performance of public sector undertakings, it is essential to see the relationship between total return (profit before interest and tax-gross profit) obtained on the total capital employed (net fixed assets excluding capital work in progress, etc., plus net working capital). Gross profit as percentage of capital employed was 7.6 per cent in 1975-76, which increased to 9.4 per cent in 1976-77 and then declined to 7.7 per cent. If we consider the net profit after tax, we find that public enterprises have been running in loss except during 1981-82.

Out of the 187 running public sector enterprises 107 made a profit of Rs. 1,297 crores during 1981-82 and the remaining 80 units incurred loss of Rs. 812 crores, bringing in a net profit of Rs. 485 crores. The ratio of gross profit to capital employed which was stagnant between 7.6 and 7.8 per cent during the past few years recorded a significant improvement to 12.2 per cent in 1981-82 and is reported to have further improved during 1982-83. This was possible mainly due to increases in capacity utilisation and the proper prices for their products.

Another important point which needs to be considered is the financing of fixed assets formation in the public sector. Internal resources generation (profits after tax less dividends plus depreciation and write-offs) of the public sector is relatively less compared with the private sector and therefore the former has to depend on external sources (share capital issues for cash, borrowings, sundry creditors and other current liabilities). In case of Central Public Sector enterprises, financing of gross fixed assets formation during 1975-76 to 1979-80 shows that 26 per cent was financed out of internal resources and 74 per cent through external resources. As regards private corporate sector (large companies), internal resources generated were 81 per cent and external resources 19 per cent during the same period.

However, the definitions of external and internal generation of resources do not necessarily show that the internally generated resources are ploughed back in the private sector enterprises. The ploughing back of profit in the private sector is not, and cannot be, synonymous to generation of internal resources. In fact, the private sector utilises shareholders' money and deposits from the households to generate resources to set up enterprises in which the promoters' share is sometimes as low as 3 per cent to 5 per cent but the management of the company remains in the hands of these promoters. The profits generated in existing companies are not always utilised for provision of capital in new companies. The existing profits are taken away to utilise them for other purposes. This works like ductless glands of the economic body of the country, the repercussions of which are seen in the generation of black money and the expatriation of money to foreign countries.

The difference between the two sectors can be explained, however, if one considers the areas in which public and private sector enterprises are operating.

Public sector enterprises are operating in the production of capital goods, machinery and provision of industrial infrastructure. The pricing policy of public sector enterprises is guided by the overall economic objective and plan priorities. The prices charged are not reasonably remunerative to yield comparable rates of profits and provide more internal resources. In contrast to this, the private corporate sector is operating in consumer goods sector, intermediate products, etc., and gets advantage of various incentives and concessions extended by the government as also protection from foreign competition. The prices charged by the private sector companies are remunerative and this results in high profit margins.

Moreover, private sector companies are beneficiaries of products and services produced in the public sector enterprises; they operate in areas where consumer demands are very high and produce and sell those products which are consumed by high-income groups. The private sector production is geared to cater to the requirements of well-off sections of the population, whereas the public sector produces goods for the common man and for strengthening the overall growth potential of the economy irrespective of the profits generated.

This then is the picture of generation of surpluses through public sector enterprises, which is an important component of our programme for economic growth. The poor profitability of most of these undertakings is largely due to underutilisation of capacity, which in the case of some units was as low as 13 per cent during 1981-82.

There is thus a vast scope for upgrading the performance of our public sector units and for generating sizeable surpluses from them for augmenting our revenues for economic growth. □

YOJANA

In its November Special Issue examines in depth the question of involving the voluntary agencies in the implementation of poverty alleviation programmes. Participants in this special study include eminent economists, social thinkers, administrators and workers in the field.

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The special number combines 1-15 and 16-30 November, 1984 issues.

The search for oil

D. Janaki

Since its establishment in 1956, the Oil and Natural Gas Commission has taken up drilling operations in different parts of the country and also in the Bay of Bengal and Arabian Sea. India is now sharing its expertise in petroleum technology with many developing countries.

THE GROWTH OF India's oil industry is synonymous with the development and evolution of the Oil and Natural Gas Commission. Establishment of ONGC in 1956 marked a beginning of a systematic search for oil in the country.

In the past 28 years, the quest for oil has taken ONGC to vastly diverse areas in all the four corners of the country. The search for oil gas from the snowy peaks of the Himalayan region to the depths of the Bay of Bengal and the Arabian Sea.

Onshore drilling

ONGC's drilling record is impressive. It struck oil at Cambay in the very first well drilled in 1958. In 1960 oil was struck at Ankleshwar in Gujarat, and till Bombay High was discovered it was India's largest oil field. The output in Ankleshwar so far works about to 5 crore 40 lakh tonnes. In 1961, oil was found at Kalol in Gujarat and at Rudrasagar in Assam. Sanand in Gujarat yielded oil in 1962. Each success gave ONGC the impetus to intensify the search.

Offshore ventures

In 1970, ONGC widened its horizon. The first offshore venture was near Aliabet in the Gulf of Cambay. The fixed platform for this purpose was designed locally fabricated and erected by ONGC. It was from this platform that India's first offshore well was spudded.

Drilling began in Bombay High in 1974. Oil was first struck in a limestone reservoir. On 21st May, 1976, two years after the discovery of oil there the first barrel of commercial oil was pumped into the tanker 'Jawaharlal Nehru'. ONGC's offshore exploration ranges from the Gulf of Cambay to the Coromandel Coast. From areas off the Krishna Godavari delta to south of the Sunderbans.

The ONGC expects to double its production by 1989-90, says the Chairman of the ONGC Col. S. P. Wahi. The production level is expected to be 45 million tonnes of gas and oil. The exploratory efforts would be nearly two and a half times more than that undertaken during the 6th Plan.

The ONGC has at present taken up exploratory work in 26 sedimentary basins and thus departed from the earlier approach of selective concentration. ONGC's thrust would be more on onshore exploration. Exploratory work would be taken up in a big way in Himachal Pradesh, Jammu and Kashmir, Rajasthan, West Bengal, Bihar and other areas. According to Mr. S. Talukdar, Member (Exploration), ONGC, Asia's biggest giant wells 7 to 7½ Km. deep would be dug in the Himalayan region.

This is the first time such a venture is being undertaken and the help of foreign experts would be sought for this. The expenses for sinking one such well will be more than Rs. 15 crores. The prospect of gas find in this area is high. Gas that might be found here could be easily consumed by growing industries in Ludhiana, Jalandhar and Amritsar. Four super wells, each 5 Km deep, would be dug in the Cambay basin. If proved successful, there would be substantial increase in production.

ONGC will also undertake aggressive drilling for oil and gas in the Godavari, Krishna and Cauvery basins, offshore drilling off the Kerala Coast and intensive drilling in the Andamans. According to the ONGC, the oil area in the southern belt is of a complex nature and there is more of gas than oil. Drilling in Andamans, if successful, would revolutionise the economic potential of the island as it had done in Gujarat.

(Contd. on page 23)

Public sector : A different angle

Prakash Tandon

The Public sector, which was born of sound concepts, most often lacks sophisticated and understanding masters and courageous managers. Managing the public sector is going to need a new breed of managers whose responsibility, unlike in the private sector, will transcend far beyond a few thousand or even a few lakh shareholders. Government, as the sole proprietor, should respond to the changing needs and, among other things, consider giving the public enterprises more effective autonomy together with better accountability, says the author.

LET ME BEGIN with tracing the genesis of our public sector, which is contained in a White Paper that was put out by the Government of India on 21st April, 1945, as a statement of Government's post-war industrial policy. The following extracts from the White Paper are as relevant today :—

The Government of India have reached a stage in their planning of industrial development when they consider it would be in the public interest to make an announcement of the conclusions reached by them on various aspects of policy.

It was indeed contemplated by Parliament, when the Government of India Act was passed, that industries in which a common policy was desirable would be brought under Central control. Government consider that for achieving the foregoing object the following industries should be centralised :—

1. Iron and Steel.
2. Manufacture of Prime Movers.
3. Automobiles and Tractors and Transport vehicles.

4. Aircraft.
5. Ship-building and Marine Engineering.
6. Electrical Machinery.
7. Heavy Machinery, such as Textiles, Sugar, Paper, Mining, Cement and Chemical.
8. Machine Tools.
9. Heavy Chemicals and fine chemicals, chemical dyes, Fertilisers and Pharmaceutical Drugs.
10. Electro-chemical Industry.
11. Cotton & Woollen Textiles.
12. Cement.
13. Power Alcohol.
14. Sugar.
15. Motor and Aviation fuel.
16. Rubber manufacture.
17. Non-ferrous metals Industry.
18. Electric Power.
19. Coal.
20. Radio Engineering.

Objects of industrialisation

Government consider that the fundamental objects of industrialisation are three-fold :—

- (i) To increase the national wealth by the maximum exploitation of the country's resources.
- (ii) To make the country better prepared for defence.
- (iii) To provide a high and stable level of employment.

Based on the 'Third Nehru commemorative Lecture on the public Sector' delivered recently under the joint auspices of the Documentation Centre for Corporate and Business Policy Research and the Standing Conference of Public Enterprises, New Delhi.

It is axiomatic in Government's policy that the additional wealth created by industrial development should be distributed in a manner that may be regarded as socially equitable. Powers must be taken and consciously used to secure this purpose.

If India is to make rapid headway and if the standard of living of the masses is to be effectively raised, a vigorous and sustained effort is necessary in which the State no less than private industry must take a part.

A primary point in industrial policy is the extent to which the State will take part in industrial enterprise. Apart from power, ordnance factories, public utilities and railways, basic industries of national importance may be nationalised. . . .

All other industries will be left to private enterprise under varying degrees of control. There may be no control except such as is required to ensure fair conditions for labour.

Within the field considered open for State enterprise, the question whether the existing units which are privately owned should be taken over by the State will be examined on the merits of the type of each case.

Certain industries of national importance such as ship-building and the manufacture of locomotives and boilers will be run by the State as well as by private capitalists.

Government will be prepared to give adequate financial support to research organisations set up by Industrial Associations representing organised industries, and the Council of Scientific and Industrial Research.

The Government of India are examining the question of the promotion of an Industrial Investment Corporation or a similar institution.

Government will undertake to examine from time to time, the tax system with a view to ensuring that, while securing the ends of social justice and national budgetary interests, the taxation does not tend to act adversely on development.

Government have come to the conclusion that they must take power to license industrial undertakings. One effect of this unregulated freedom to promote industrial enterprise has been the concentration of industry in certain areas. There are vast areas in this country which, though suitable for industrial development, have not been developed because industry has tended to flow in particular channels.

The effects of such concentration are economic, social as well as strategic. It seems unsound from the strategic point of view that so large a proportion of industry should be concentrated in a few cities Perhaps, an even more important consideration is that concentration deprives other areas of the country of the beneficial effects of diversified economy. Lastly, it is not clear that concentration is necessarily economically sound.

Control over development would be necessary from another point of view. In an unregulated industrial economy there is likely to be a tendency for capitalists to go in for schemes which promise quick returns. This will lead to lopsided development—as scramble for some industries, with the danger of over-production and excessive competition and inadequate attention to other industries which are equally necessary in the national interest. To overcome this difficulty it would be necessary to fix targets, to allocate them on a regional basis and to see that these targets are achieved.

Government propose that they should take power to license the starting of new factories and the expansion of existing factories, for, without this power, planned industrial development will be quite impossible. At the same time in order to avoid unnecessary delays it is proposed to set a monetary limit to the plants or projects requiring licence so that very small plants, moderate extension of existing plants or replacements which do not add to output should not be subject to licensing.

In a planned economy it is impossible to do without controls. They propose that apart from licensing control should be undertaken to achieve the following objects :

Regulating balanced investment

To secure balanced investment in Industry agriculture and the social services ;

To secure for industrial workers a fair wage, decent conditions of work and living and a reasonable security of tenure. It is a fundamental objective of industrial development that it should enable the general standard of living to be raised. It would be a frustration of this objective if industrial workers do not get fair wages and decent working conditions. In the past, these matters were left largely to be settled between the employers and the workers, but it may be necessary for the State to intervene with statutory powers.

To prevent excessive profits to private capital. In the case of private undertakings, subject to free competition, it would be a mistake to discourage enterprise by undue restriction of profits.

To ensure the quality of industrial products in the interests of both internal and external markets. It is of the utmost importance to ensure good quality for the internal as well as external markets. This involves standardisation of products and administrative machinery to enforce standardisation.

To ensure that unhealthy concentration of assets in the hands of a few persons or of a special community would be avoided. This may be secured by a judicious exercise of controls, such as capital issues control and the licensing machinery for the regionalisation of industry.

To require necessary technical training of personnel and to extend the benefit of such training to minorities and backward communities.

Pre-requisites for growth

This enunciation of industrial policy for India spelled out the following pre-requisites for India's growth.

- Industrial regulation and control.
- Nationalisation of certain key industries.
Three sectors of the Economy—Public, Private & Joint.
- Regional balancing.
- Fair deal for labour, minorities & backward communities.
- Prevention of concentration of wealth and control of industry.

These were adopted and incorporated (but unacknowledged) more than a decade later in our post-Independence Industrial Policy and Regulation Act, through the Avadi Resolution on a Socialistic Pattern of Society for India.

The White Paper was prepared at about the same time as the Bombay Plan by a group of industrialists and the Congress Party under Nehru. The remarkable feature is that two such disparate streams of industrial thinking, as the Imperial power and Nehru, should have thought so alike. Their main rationale was that to get a balanced and technologically advanced growth, state capital would have to step in to the areas which will not offer sufficient attraction to private capital. Nehru called it the commanding Heights while the Imperial Government referred to it as Balanced Growth.

Case of public sector

Our public sector has always been in the limelight, receiving much criticism and gratuitous advice from all sides—the founders, the masters, supporters and opponents alike. Nothing succeeds like success and nothing fails like a failure. Does this criticism therefore stem from a lack of fulfilment of the euphonic expectations, that were perhaps pitched too high! And because the performance was disappointing, instead of applying the correct remedies that had a chance of working, a lot of unprofessional solutions were applied, such as firing and sacking the corporation heads overnight, appointing them for such short tenures as two years, and worse interference. And the unfortunate fact remains that those to whom the public sector was answerable were often themselves quite innocent of the basics of industrial structures, systems and culture.

On the other hand, a management can never hope for an ideal environment; its task is to do its best in the environment as it exists, though even the small measures of success induce a change in the environment and to realise that much that it wishes to achieve is within its own effort, whatever the constraints—economic, political, market or financial. Many competent managers that set out to achieve under difficult conditions, even in the public sector, did achieve, while others who spent their time talking of constraints and what prevented them from

achieving failed. This has always been the search of human endeavour, of break-through under the most adverse conditions.

Having stated this, that our public sector was born of sound concepts, but often lacking in sophisticated and understanding master and courageous managers, let me state some pre-requisites of successful organisations.

- Clear-cut, consistent and manageable objectives—regularly evaluated for fulfilment, with road-blocks removed, and periodically examined for their consistency and good fit with the changing environment.
- A structure in consonance with the objectives, and one that alters with the changing objectives, needs or environment.
- Systems that ensure the proper functioning, of the structure, which in turn should be designed to subserve the objective.
- A culture that gives a predictability to the organisation's reactions, and the capacity to respond fairly to its people and speedily and competently to its tasks and challenges.

Aimless or outmoded objectives; structures unsuited to the tasks; systems that are ill fitting, cumbersome and over-expensive; a poor culture—these are the factors that affect organisational success. If the wind is behind the organisation's sails, it will move faster than if it has to sail against political and administrative headwind.

Performance of the public sector

Let us look at the record of the public sector today :

- 172 public enterprises with total capital employed at Rs. 36,118 crores, accounting for total sales of Rs. 41,353 crores, produced a total profit before tax of Rs. 160 crores during 1982-83.
- Of this, 4 enterprises—O.N.G.C, I.O.C, O.I.L., whose prices are administered in relation to global prices, and the S.T.C largely, so far, in canalised trade—employing a total capital of Rs. 5,567 crores made a profit before tax of Rs. 1,607 crores.
- The remaining 168 enterprises employing a total capital of Rs. 30,551 crores cumulatively among them made zero profit.
- The rate of return of the 4 organisations mentioned above, as profit before tax to total capital employed, was 29 per cent.
- Had the 168 public enterprises earned even a 15 per cent rate of return—half that of the leading four—they could have given the nation, on the Rs. 30,551 crores of capital they employ, a return of Rs. 3,055 crores last year in addition to the Rs. 1,603 crores of the leading four, making a total of rest Rs. 5000 crores.

To the total national budget of India last year, it would have meant a nearly 25 per cent windfall in reverse of contribution to the national resources.

- A 15 per cent rate of return on total capital employed is quite modest ! It would allow for a 50 per cent tax, leaving 7.5 per cent, giving, say, half in dividend; and half in reserves for ploughback into future growth—both quite modest

By providing a profit of Rs. 5,000 crores, the public sector would indeed have occupied the Commanding Heights of the Economy, with a grateful nation in the bargain. Nothing would then have succeeded like such success !

And of one thing I am convinced from my quarter century association with the Public Sector of India of which were spent in active direction of enterprises one among the first four mentioned above and the other—in the leading nationalised bank—that the Public Sector can be made to turn around in 3 years, and in 5 years give the 15 per cent rate of return I suggest, rising to 20 per cent plus. It is possible because we have the talent to make it efficient and profitable, and a far from saturated market.

Turning to the solutions, they lie primarily with the share-holders, Government, who alone as the sole proprietor can take the responsibility for the success or failure of the public enterprise system, since it controls the following crucial areas :

- It is the sole owner, and takes all the investment decisions ;
- It appoints and de-appoints all top managers. And it does this without any constraints upon its capacity and freedom to act.

Naturally, the instruments it chooses—the managers—have a responsibility too, but ultimately the responsibility you expect them to discharge will be directly in proportion to how well you choose them and, having chosen, give them the support and freedom to act. I recall how one minister of hallowed memory once issued an order, quite unknown to the Chairman of the Corporation and his Secretary, at 7 O'clock in the evening removing the three full time directors. As he naively put it, he did not like them at all.

Let me now come to some concrete suggestions.

Re-arrangement of ownership pattern

First and foremost we should decide whether we wish to keep it as the Public Sector or, as it is, a State Sector. Today, the public has no say, no ownership, no control. It is owned and run wholly by the state, its political and administrative set-up, and the public is kept rigidly out of it except, it might be argued, through Parliament. I would suggest that the ownership of the Public Sector should be organised on the following lines :

- A 25 per cent share by government, which it may retain to ensure a feed-in of government policy;

- 5 per cent share by employees on a stock options basis, selling back to the Company their shares at the market value when they retire, when they can buy them back in the market as members of public;
- 10 per cent shares with the lending bankers and financial institutions;
- 20 per cent shares with large buyer and seller customer organisations especially in the public sector, both as investment and for watching their interest e.g., Indian Airlines and Air India.
- 40 per cent shareholding with the public at large.

These share percentages are tentatively suggested, and there may, in addition, be a holding by a foreign collaborator. Furthermore, at the beginning and through gestation, especially of a longer duration, government, the financial institutions, and the related enterprises may to begin with own the entire investment, which would be progressively shed to the public, and others as the enterprise begins to stand on its feet. In fact, after a point, government as founder shareholder might well wish to shed all of its shares, and trust the state financial institutions to look after the interests of state policy, and utilise the funds through sale at market price to invest in and catalyse new areas and ventures.

Board

- Such an ownership pattern would call for a new board pattern.
- A supervisory board representing government, financial institutions, customers, inter-corporate investors, employees, and specialists suited to the specific disciplines of the organisation.
- A working board of fulltime directors, of whom the Chairman and the Vice-Chairman would be on the Supervisory Board, both of whom must be full time employees. We must avoid retired politicians or serving administrators as Chairman.

The Supervisory Board would receive and approve a 3 to 5 year plan the annual budget, and review quarterly performance. It is important that as their job is to supervise, they do not participate in functional committees and sub-committee, except an Audit Committee, whose task it would be to conduct annually a performance-cum-propriety review.

Decision-making

Our present system of the hierarchical, one-upon-one and vertical decision-making, where the notings usually begin at innocent lowest level of hierarchy, must be changed to a collective, horizontal and inter-disciplinary system. Internal Committees concerned would be taught to discuss and decide, and send up for approval only those few subjects where the decisions have to be taken at the corporate level. In our system, we have refined the group decision-making in Committees into a sterile art for

non-action or to postpone it. Therefore, the present filing and noting system should be changed to a group-oriented, multi-disciplinary system of analysing a problem, assessing alternate courses of action, evaluating each, and recommending the rationale of the preferred course of action—all done with speed.

Against this frame of two-tier board system, supported by the Audit Committee, and an internal decision-making system, we could do away with the present control system involving a multiplicity of control agencies, representing the political, administrative and organisational hierarchies :

1. Cabinet;
2. Public Undertakings Committee;
3. Ministry's Consultative Committee;
4. Comptroller and Auditor General;
5. Administrative Ministry;
6. Finance Ministry;
7. Concerned Ministries;
8. Bureau of Public Enterprises.

The culture of asking irrelevant, often instigated questions in the legislature, and the whole system of controls freezes the managers' desire or capacity to act.

Instead, we need a simpler system, the purely organisational system of control, which will achieve all that the present cumbersome system sets out to achieve, but does not. The new control system would comprise :

1. Quarterly meetings of the Supervisory Board;
2. Annual performance, the Budget, and the Long-Term Plans would be examined and approved by the Administrative Ministry.
3. Quinquennial review by Public Undertakings Committee.

At the Administrative Ministry's review, Finance Ministry, Planning Commission and any concerned ministries should be associated. In between, the Secretary of the Administrative Ministry will remain in touch with the Director representing him on the Supervisory Board, and, of course, the Chairman.

It is important, however, that those who control and review from outside the organisation—members of the Supervisory Board, Public Undertakings Committee and the Ministers must know themselves what they are reviewing and be in a position to impress and help those whom they are reviewing !

This is the type of system that multinational organisations generally adopt, successfully and effectively, with their large global ramifications. The key

instruments of control by their Centres are only the decisions in regard to consultation and agreement on :

1. Capital and major borrowings;
2. Acquiring and dispensing of assets, above a limit, and
3. Appointing and de-appointing key personnel : in the case of the Chairman, directly, and for other senior appointments through and in consultations with the Chairman, who announces the appointments and de-appointments. They are not announced by the Centre except the Chairman's own appointment.

In effect such control will be far more effective than our present wide spanned and diffused over-control. Certainly, in no major trans-national organisation would a state of affairs exist for long, where after their first 4 companies, the remaining 168 among them cumulatively produce a zero profit, and that too in a single, concentrated and highly unsaturated market like India, whose per capita consumption of every product that these 168 firms produce is low.

Suggestions

Let me, in the end make two important points.

First, the general tendency in the public sector management to place all blame at the political and administrative doorstep is not fair, nor wholly correct. The fact is that over three decades, since its inception, the public sector has received the consistent support of different governments, for its growth and expansion. In fact, government has done this often against criticism from the public, the press and private industry, that despite its indifferent performance it has received an undue share of fresh investment and price preference. In fact, it has been felt by some that such treatment given to private sector would have produced better results. Some would go further and suggest that the incommensurate benefits the nation has derived so far would justify considering winding it up, as indeed is happening in certain countries, on the justifiable ground that the present magnitude of investment and support, especially in a scarce resource country, would be better placed with those who would make better use. Let our public sector management, therefore, be duly conscious of such favoured treatment.

While Government's own policy dogma and support to the public sector has remained stable year after year, as so also the general public support, there are many individual public sector units which have become endemically unstable and unviable, fulfilling neither their objectives nor producing any profits. It is the duty of their managements to either assure a viability or recommend their winding up.

Equally, the managers of the public sector should ask a question, whether their low profitability is not due largely to internal causes and lapses, particularly

in the management of cash, working capital, inventories, cost and time over-runs, productivity, and a whole range of factors which are entirely within their control.

Government, too, as the sole shareholder, should respond to the changing needs and among other things consider giving the public sector more effective autonomy, together with better accountability. In addition, it should consider creating a counter-veiling force that will also provide an answer to the monopoly and semi-monopoly situation in the public sector, where the consumer at present has neither a choice nor a voice—he has to buy whatever product or service an enterprise offers. We have only one airline, one power supply, one minerals and metals activity, and so on. The consumers of indigenous products of public or private sectors, do not have a choice of importing themselves. A new capital structure, a new board structure, and shares quoted on an exchange would provide the countervailing force with a judgement that government and political apparatus has not provided.

Managing the public sector is going to need a new breed of managers, whose responsibility, unlike in the private sector, will transcend far beyond a few thousand or even a few lakh shareholders. Their shareholders are the Nation, and they will be answerable to the nation. They are expected to play the role of catalysts and pace-setters in R & D, technology, propriety, price and quality, and employment. While learning and practising the normal disciplines of management, they will have to be trained and groomed in their national accountability. I had the privilege of starting an optional course at the Indian Institute of Management in Ahmedabad in 1972, after leaving the public sector. The response was excellent from the faculty for the preparation of the course, case studies, and from the students; but in few business schools and colleges of Commerce is there separate attention paid to research and training for public sector, as there is for the administrators. Our public sector managers and management academia will have to cooperate in such effort to build a corpus of knowledge and practice, that will develop a new theoretical and empirical framework for the public Enterprise System. We could do with a school of management, researching and teaching exclusively for public sector management at the initial and post-experience levels.

If managing the public sector is going to need a new breed of managers, and if it is going to remain responsible to the Government, the administration too will need toning up in dealing with the system, by grooming a new breed of administrators, who through specialised training and exposure to industrial management and its culture are better able to deal with their opposite numbers in the enterprises. At present, their advantage over the managers of possessing the ultimate power to decide, is not always matched by a commensurate depth of knowledge. They must gain this training in industrial management, and work for spells at the coalface of enterprises. □

(Continued from page 17)

(The search for oil)

Steps are being taken to make ONGC self-reliant in its technological needs. Till two years ago 65 per cent of equipment was imported. This has been reduced to 40 per cent and would be further brought down to 35 per cent during the 7th Plan.

Production achievements

ONGC's crude oil production in 1983-84 was to the tune of 23.15 million tonnes. The targetted production for 1984-85 is 26.6 million tonnes. The demand for petroleum products during 1984-85 is estimated at 39 million tonnes out of which ONGC would be able to produce 27 million tonnes.

Gas : During 1983-84, production of natural gas increased by 20 per cent as compared to the previous year and the gas supplied was 2227 million cubic metres. The target for 1984-85 is 2665 million cubic metres.

Drilling : ONGC's drilling activities have shown an appreciable improvement in 1983-84 when 205 wells were drilled. During the current financial year, ONGC proposes to complete 252 wells both on-shore and offshore.

Profit : ONGC made a profit of Rs. 1670 crores in 1983-84. Out of this Rs. 1500 crores will be reinvested in ONGC activities. The profit anticipated for 1984-85 is Rs. 1700 crores.

Research and Development : ONGC has established three Research and Development institutes—the Institute of Petroleum Exploration and the Institute of Drilling Technology both at Dehra Dun and the Institute of Reservoir Studies at Ahmedabad. Oilshore technology Research Division is in the offing.

The R and D efforts of ONGC are being complemented by the large and well-equipped computer service at Dehra Dun. The Centre which was commissioned in 1976 helps ONGC to process seismic data and aids it in the mathematical modelling of all reservoirs. ONGC is also taking steps to expand computerisation in the field of oil exploration, materials management, project scheduling etc. Five regional computer centres are to be set up at Bombay, Madras, Calcutta, Baroda and Gujarat.

The Institute of Reservoir Studies in Ahmedabad undertakes research in reservoir engineering. Its functions includes up-dating old production fields, selection and optimisation of primary and enhanced oil recovery techniques for oilfields etc.

ONGC's success within the country has been well recognised by countries abroad. Through ONGC India is sharing its expertise in Petroleum technology with other developing countries like Iran, Iraq and Tanzania. □

Why sickness in industry?

A.L. Roongta

Sickness in industry is a measure of pervert compassion for the 'distress' of the affluent owners of industrial assets left dilapidated at the cost of their creditors and the country. It is so because large sectors of the economy have been fossilized and straight-jacketed under feudal arrangements financed by benevolent, development financing institutions and banks, says the author.

SICKNESS IN INDUSTRY IS a very current expression in our country

Fortunately, there is no fashion to use this word for other sectors of economy. We do not hear of sick farms or sick houses or sick roads or vehicles, howsoever under utilised or badly maintained they are.

Paradox

It is a measure of our pervert compassion for the 'distress' of the affluent owners of industrial assets left dilapidated at the cost of their creditors and the country. Through the economic literature, the press and, above all, in term lending institutions and the banks, repudiation of liability to pay to the creditors, invites the presumption of sickness.

In other countries companies get weak, get merged, sometimes liquidated. Industrial assets change hands, get disposed of, dissembled, reassembled. This is all normal and healthy. Grandparents die and grandchildren are born. Only in our blessed land, indolent and recalcitrant are supposed to be immortal.

What part of our industrial economy is not sick ? Jute mills, sugar mills, textile weaving mills and some others, apparently, are all sick. But the textile industry as such is far from sick when lakhs of powerlooms are bursting forth despite industrial bureaucracy's frenzied attempts to nip them in the bud. Despite their occasional cries of distress, quite a few of the synthetic spinning units have added spindles during the last one year in Rajasthan alone. If only our laws and government policies had not made it a 'hundred hurdles race', powerlooms would have sprung up not only in Bhiwandi, Ichhalkaranji and Surat, but practically in hundreds of towns, big and small in the country

Yet

In Pali, Jodhpur and Balotra in Rajasthan, dyeing and printing units, despite the sword of the anti-pollution prosecutions hanging on them, have increased their number in scores and turnover on rock-bottom competitive prices in crores last year. The costly, the dishonest, the indolent, the obsolete are dying and undeterred by their mortality, new entrepreneurs are going in those very industries ! Is it not true ?

Credit Blocked

The total institutional credit locked up in sick units showed a marked increase to Rs. 3,178.85 crores at the end of 1982, from Rs. 2,389.34 crores at the end of previous year. Rs. 800 crores of subsidy by the tax-payers to promote sickness within a year ! Is it a small figure ? Figures for the next 18 months are not available. They are estimated to be about Rs. 1500 crores.

These figures were resented by the Government in the Parliament in March '84. Why are they on the defensive about disclosing the names of these eminent sick ? The grounds advanced are that banks are

in the statutory protection from disclosing the quantities, particulars of bad and doubtful debts. Disclosure of names of chronic defaulters to the country through the Parliament will help the sick and the others all.

Bank credit

Of the total amount of Rs. 3,178.85 crores locked up in sick industries up to 1982 end, the banks accounted for Rs. 2,577.62 crores and the all-India financial institutions for Rs. 601.23 crores. The corresponding figures till the end of 1981 came to Rs. 2,025.34 crores and Rs. 33.79 crores, respectively.

Out of 275 sick industries in assistance portfolio of all-India financial institutions (IDBI, IFCI, ICICI, IRCI, LIC, GIC and UTI) in December, 1982, those belonging to MRTP houses were 29.

Assets of MRTP houses

S No	Name	Assets	Turnover	Profit before tax
1	Tatas	2430.83	2883.15	213.66
2	Birlas	2004.74	2367.08	113.69
3	JK	620.31	575.43	1.77
4	Mafatlal	598.89	833.31	12.32
5	Reliance Textile	512.34	481.97	29.36
6	A.C.C.	473.07	427.48	40.97
7	Thapar	461.50	632.24	37.48
8	ICI	378.31	489.31	16.40
9	Sarabhai	356.91	515.54	1.24
10	Kirloskar	334.29	445.08	32.59

An ex-Chairman of IDBI when resented with a proposal to write off the IDBI dues in a Birla managed company a few years ago going into liquidation, chose to go back to the earlier rule of thumb creditor-debtor relationship.

He summoned the seniormost advisor to the Group, presented him the choice that if IDBI's money is to be lost in one company, IDBI would disqualify all other companies in which the eminent group executives figure. The surprised elderly gentleman sought his professional guidance, 'but wherefrom money can be put in the company at this stage and how?' To which he naively replied, 'I do not know. I am only a banker. You are an industrialist. You people never need our guidance to take away any amount of money from companies flourishing. Why this predicament only when you have to bring in money?' The Chairman confided to the Members of the Board of IDBI that the sick dying unit got the money to clear the IDBI's dues, from the heavens!

If only we could go back to the pre-managing agency days! Companies which do not have either

money or credit at all to be able to borrow from the investment market, their credit normally would be NIL in the corridors of financial institutions also.

An observation

It is interesting to know what a Non-Resident investor, Swraj Paul said, "big industrialists have invested a total Rs. 140 crores but they exercise control over capital worth Rs. 26,000 crores. On the other hand, the country has already taken loans on questionable terms from the International Monetary Fund, while persons who have benefited from governments industrial credit and subsidies have invested huge sums in foreign lands."

Piloting the recently enacted Bill for IRDB, Finance Minister, Mr. Pranab Mukherji was himself constrained to concede to the chorus of a demand from either side of the House for something drastic about the current epidemic that falling sick and continuing sick had become something of a vested interest.

COSIDIC members

Fortunately, two-third of the total development financing of industry done by IDBI is through the members of COSIDICI. In 1983-84 approximately Rs. 1,000 crores actually were disbursed. Hundred per cent repayment in time of this money stands insured through the wonderful federal system of our development financing structure. An Industrial Development Corporation (IDC) or a State Financial Corporation (SFC) may catch cold, may suffer temporary fever also. But the very system forbids it to die a slow death from Cancer or TB. This is the prerogative only of companies guarded by the affluent. In this Orwellian Year, 1984, the large-scale sick industries have a 'Big Brother' in FICCI or similar organisations, which always put the government in the dock and continue pressing for more succour. One such pleading before the government said on 12 July, 1984: The Economic Times, "...there is no reason why fiscal and credit reliefs should be denied to an industry while it actually falls sick."

Diversion of funds

The causes of sickness have been analysed time and again. Among a plethora of ills cited by the industrialists, 'an act like diversion of funds' is seldom brought to the fore, which, in fact, is a major factor causing in the 'healthy' to gradually become 'sick'.

In a 1979 study conducted by the Reserve Bank of India on the causes of industrial sickness in 378 large units (with bank borrowings exceeding Rs. 1 crore), two thirds of these units were found to have turned sick owing to managerial deficiency and outright mismanagement, including 'diversion of funds'. It is ironical that not a single unit was found to have turned sick due to shortage of a major input: credit, particularly for meeting working capital requirements. Perhaps it is too much to expect bankers to recognise 'their own' contributing to 'sickness'.

*Causes of Industrial Sickness in Large & Medium Industries
(1979)**

Causes	No	%
(a) Mismanagement/management deficiency (including diversion of funds, infighting, lack of marketing etc.)	197	52
(b) Market recession	86	23
(c) Faulty initial planning and other technical drawbacks	52	14
(d) Labour trouble	9	2
(e) Other reasons (power cuts, shortage of raw material etc.)	34	9
Total	378	100

*RBI analysis

Besides the all-India institutions (IDBI, IFCI, ICICI, LIC, IRCI), the scheduled commercial banks have a vital interest in rejuvenation of sick units. Of the total amount of institutional credit of Rs. 3,179 crores advanced to sick units as in December, 1982, over four-fifths comprised bank credit.

Growing Industrial Sickness

As at end of	No. of Sick Units	Outstanding credit (in Rs crores)
<i>A. Scheduled Commercial Banks</i>		
December, 1979	22,366	1,622 55
December, 1980	24,550	1,808 66
December, 1981	26,758	2,025 54
December, 1982	28,360	2,577 62
<i>B. Financial Institutions</i>		
December, 1979	202	279 00
December, 1980	205*	325 87
December, 1981	224*	388 79
December, 1982	275†	601 23

*IDBI, IFCI, ICICI.

† IDBI, IFCI, IRCI, LIC, UTL.

Static dynamism

Large sectors of our economy have been fossilized and straight-jacketed under feudal arrangements financed by benevolent, development financing institutions and banks. They are regularly subsidized on their deficit financing with the hard-earned money of the tax-payer and the depositors in the bank. Seminars in salubrious surroundings are held, in our country, going round and round over a static situation, concluding wisely that it must remain STATIC. So long as such seminars can be financed by governments, banks and the creditors, sickness can thrive till eternity.

Today, 50,000 and odd industrial units reportedly sick include the eminent conspicuous presence of about 500—those owing Rs. 1 crore and above. It is these who owe 90 per cent of the Rs. 3,100 crores

so far blocked. The small in their totality are sick only to the extent of Rs. 350 crores which would be less than what the small entrepreneurs would be losing out of their hard-earned money perhaps every year in the fierce competition in which they operate.

A thought

If only the SFCs were given a directive by the State Government and IDBI who jointly own them, that they would like these 50,000 or so closed or nearly closed industries to start functioning in the hands of doctors keen to put in their own entrepreneurial capital to cure them of their illness, the present culture and power of SFCs are result oriented enough to change the national scene within a year. □

Srisaillam hydro project

WITH THE COMMISSIONING of fourth Hydro Generator Unit of 110 MW at Srisaillam plant recently, the installed power generation capacity of the project has risen to 440 MW. Srisaillam project seeks to harness the vast potential of river Krishna by constructing a 157 metre high dam after its confluence with Tungbhadra in district Kurnool of Andhra Pradesh.

The Hardwar Plant of Barat Heavy Electricals has supplied seven hydro generator sets of 110 MW each for this project. The four units for Srisaillam Stage-I have already been commissioned. The three sets for Stage-II are in various stages of erection.

When all the four sets of Stage-I are commissioned the annual energy contribution from this project to the grid will rise to 2600 million units. It will further increase to 3700 million units after the commissioning of the balance three sets of Stage-II. The Srisaillam Hydro Electric Scheme would not only release surplus water in the Krishna basin but is also aimed at supplying water to Nagarjunsagar reservoir enabling its hydel units to generate power round the year. □

Third Northern Railway trunk route

AN ALTERNATIVE BROAD GAUGE route between the northern and eastern regions will be available with the conversion of the Samastipur-Barabanki and the Barauni-Katihar metre gauge sections to broad gauge. There is every possibility of utilising this route when completed as the third alternative northern trunk route.

The new alternative Broad Gauge line from Lucknow to Katihar and then to Gauhati or Howrah will be very handy to divert trains from the eastern regions to the north and west.

This route will help cater to the increased traffic movement between the western region of Punjab, Haryana, Himachal and U.P. and the eastern and northeastern region of Bihar, West Bengal and Assam along with other sister States. The Railways are also considering a proposal to carry out doubling of the Moradabad-Bareilly section, which is the only single line section on the trunk route west of Lucknow. The cost of the project is estimated to Rs. 26.95 crores. It is proposed to be taken up during the Seventh Plan.

(Contd. from page 7)

Environment: Beyond pretty trees and tigers tree planting. Once the women are organised and mobilised, the evidence is that they work with great keenness and they fight any obstacles that may be created by men, and we get as a result, some of the highest tree survival rates found in afforestation efforts. It has also been found that when women get involved in afforestation, they tend to demand fuel and fodder trees, trees which can meet household needs, whereas men demand trees that can generate cash. The highest ally in the demand for an ecologically and socially sound nature is, therefore, woman-kind.

Women now have to go out and also earn some cash. Millions of rural women today sell firewood in the towns and cities. If we look at the quantum of firewood consumed in the cities, we can say that at least 2-3 million people must be doing headloading—bringing wood on their heads to sell in the towns—making the firewood trade the largest employer in the commercial energy sector of the country. So when no other work is available, headloading at least provides some income.

Every headloading woman knows that the forests will be soon destroyed and even this horrible occupation will come to an end. But they are afraid that if they do not take advantage of the forest now, the foresters will sell it off to a contractor soon. The forest departments are extremely keen to get headloading banned. They have made no study of the phenomenon of headloading. They have not made any plans to meet the firewood needs of the cities. They have obviously not made any effort to connect the two issues. Foresters have become environmentalists: they say that these women destroy young trees, lop trees, excessively: therefore, ban them. No wonder forests are a major issue in most tribal agitations.

Holistic management

If these be the problems, then what do we do about them? First of all, there must be a much more holistic thinking regarding the management of our land and water resources. And this will not be easy, unless a determined effort is made. For all the talk about the needs for a scientific temper, it must be recognised that the current methodology of scientific analysis carries within itself an extremely unscientific practice, that of, reductionism. It is this reductionist approach that has today produced both natural and social scientists who know more and more about less and less: who know how to cure a disease but create another disease in the process. Ecology is the first scientific discipline that has actually forced people to integrate and not reduce. Let me illustrate this by describing what is happening to the three major components of our land: our forest lands, our crop lands and our grazing lands.

The destruction of forests has a major impact on the productivity of our croplands. This happens in two ways. Soil erosion increases manifold and the soil literally gets washed, leading to an accentuated cycle of floods and droughts. But equally important is the impact of the shortage of firewood on the

productivity of croplands. When firewood becomes scarce, people begin to burn cowdung and crop wastes. In many places cowdung and crop wastes are now the major sources of cooking energy. Thus, slowly every part of the plant gets used and nothing goes back to the soil. Over a period of time, this nutrient drain affects crop productivity. Add to this, the technology of the green revolution: the technology of growing high yielding varieties on a limited diet of chemical fertilizers like nitrogen, phosphates and potash. The total biomass production goes up and so does the drain of the nutrients from the soil.

Land for agriculture

If existing crop lands and irrigation water resources are not used well, then faced with a rising population the demand for colonisation of marginal lands for agriculture will grow. As large parts of the country have excellent soils and enormous sunlight and the only shortage is of water, government programmes have also promoted the cultivation of marginal lands, especially through spread of irrigation. Fortunately, the rate of expansion of the cropped area has now come down as compared to the 1950s and 60s but enormous ecological damage has already been done. Even more than forest lands, crop lands have expanded on to grazing lands. The result is that graziers have been pushed on to lesser and lesser grazing lands. This has in turn led to the overstocking of grazing lands, destroying their productivity and impoverishing the graziers in the process.

The graziers have taken recourse to two strategies in such a situation. As the environment becomes more and more hostile, they get rid of the more vulnerable cattle and start keeping goats. The number of goats in Rajasthan has expanded dramatically—much faster than any other livestock. Environmentalists may howl that the goat is highly destructive of the environment but it is a far better suited animal to the hostile environment that we human beings are creating in Rajasthan, Gujarat and Maharashtra. It makes economic sense for the grazer to reduce his risk during a period of drought, which is common in these areas.

The herders try to solve their problem in yet another way: they begin to use forests as grazing lands. This infuriates foresters who see goats and cattle as the worst evil ever devised. It is true that India's forests are among the most heavily grazed forests in the world. As forests are now disappearing in Rajasthan and Gujarat, nomads from these states now enter Madhya Pradesh in large numbers, still a heavily forested State.

Loved by foresters

Meanwhile, however, the foresters have found an ingenious solution: plant trees like eucalyptus which cannot be browsed by animals. Eucalyptus is loved by foresters exactly for this reason. There are many who doubt the ability of eucalyptus to produce more wood than many indigenous species. But it is indeed ironic that when the country faces an acute fodder crisis, the forester can only plant eucalyptus and

produce non-browsable biomass, that is, we must do exactly the opposite of what the people need. In fact, eucalyptus is the true weed from the point of view of the landless. It is non-browsable like all fast-spreading weeds and does not benefit the poor unless they own land.

But in this manner the cycle of destruction is complete. The forest departments have destroyed forests by selling off timber to the industrial and urban interests. The firewood shortage and the resulting soil erosion is keeping the productivity of Indian agricultural lands low. Crop lands have expanded on to marginal lands and have reduced grazing lands. Animals have moved into forests and are preventing regeneration. All the chickens are coming to roost. Meanwhile as landlessness and joblessness grow even groups like the tribals who from times immemorial have lived in total harmony with forests are turning against forests and want to sell them off as fast as they can.

Experts sit in grand isolation. Foresters have no interest in fuelwood or in crop lands. Agricultural experts have no interests in animals or in grazing lands. Animal husbandry people never tell foresters that they must produce fodder banks.

Rebuild the nature

Nothing could be more important for planners and politicians today than to rebuild nature. But this can only be done if we re-establish a healthy relationship between the people and their environment. Then only a nature that is useful to the millions, not for making millions, can be re-established. Regardless of what happens in the West, for all its electronics revolution, its biotechnology inventions, its communications satellites, its efforts to mine the oceans and its efforts to build solar cells and wind mills, regardless of how much we may want to catch up with the West in the name of modernisation, rebuilding nature and rebuilding its relationship with the people will remain the only way to solve the problem of poverty and possibly even unemployment. With some 100-150 million hectares of waste and nearwaste lands and with the crying need to produce biomass, this country can never get a better opportunity to harness the power of its people to the power of its land, to strike at the roots of landlessness, poverty and unemployment, all at the same time.

If enough biomass was available, poverty, that is, lack of cash, as defined by economists and by the modern civilisation, will not disappear. But definitely the rigours of poverty, the increasing susceptibility to natural emergencies like floods and droughts and definitely the increasing rigours of poverty will be arrested by creating more biomass. In fact, conventional measurements of poverty based on income data or on food calories are clearly inadequate in a situation where the rest of the biomass needs are becoming increasingly difficult to meet and collecting them on a daily basis constitutes the worst (and growing) drudgery humankind, especially woman-kind, has ever known. These calculations are not only just inadequate but they also reflect a strong

gender bias because they deal mainly with those aspects of poverty (lack of cash) that the male is generally concerned with but not with those aspects of poverty that the woman deals with (lack of fuel, fodder, water, etc.).

If we were to construct a concept like Gross Nature Product, we would find that for the poor it is this indicator which is many times more important than the conventional Gross National Product. In fact, we can even say that those who do not get much from the conventional GNP—the poor—are the ones who are most critically dependent on the Gross Nature Product. The Gross National Product cannot be allowed to destroy or transform the Gross Nature Product.

Just as the economists get very worried about the structure of the Gross National Product, it is equally important, if they have the poor in mind, that they get worried about the structure of the Gross Nature Product. It is not just the quantity of biomass that is important for meeting basic household needs but also its diversity: sources of biomass within any village ecosystem must be diverse enough to meet the diverse household needs. During periods of drought and resulting crop failures, which are recurring phenomena in many parts of India, roots, leaves and wild animals in the forests, used to become important, alternative sources of nutrition. Surviving on the forests during a drought is common in Bastar.

The combination of trees, grasses, crops, animals and ponds, which will found in almost every village was an extra-ordinarily interactive and resilient system to emergencies. Instead of destroying this complex and interrelated system, science must be used to build on it. In other words, it is not enough to preserve biological diversity in just those areas of our country where the flora and fauna are genetically rich and diverse by setting up biosphere reserves and national parks, but that biological diversity must be preserved and/or recreated in every village ecosystem. Concentrating on the production of a few commodities (cereals, for instance) is totally inadequate in a society which is only partly monetarised and where the vast majority still has to depend on access to free biomass resources from the immediate environment. Every village has to become a biosphere reserve.

Green cover

The answer to India's immediate problem of poverty lies in increasing the biomass available in nature and increasing it in a manner that access to it is ensured on an equitable basis. But giving a 'green cover' to the country—the real green revolution—would probably require the most holistic thinking that planners, economists and scientists have ever known. The conflicts and complementarities in the existing land use patterns have to be extremely well understood. Otherwise land-use patterns will remain as chaotic as today.

Poorer peasants will continue to oppose planting trees on community lands under so-called social forestry programmes because they are afraid this will take away their grazing lands. Forest Departments and richer peasants will only plant those trees which animals cannot touch (like eucalyptus) even though there is a stark fodder crisis all around. Nothing could take us close to Gandhiji's concept of gram swarajya than striving to create village ecosystems which are biologically diverse and self-reliant in their local biomass needs to the maximum extent possible. This will clearly demand an extremely intensive use of our natural resources like land and water to create a huge and diverse growing stock of biomass. Any science which teaches how to do this will truly have the right to be called a people's science—and indeed it will have to begin with the knowledge of the people.

An even bigger challenge is before social workers and workers and politicians who have to play a crucial role in ensuring that people can participate in this biomass-based development process. No biomass-based strategy can succeed without the involvement of the people especially women, without whom this work cannot be done.

The role of women in recreating a healthy and useful environment cannot be overstressed.

Immediately, at least, the country must recognise that a clear biomass policy is desperately needed, which recognises the competing uses for biomass in society, especially between biomass-based industry and poor households and sets clear priorities on the use of biomass in a situation of scarcity. The needs of the poor must be specified as a priority use of biomass in the existing situation of environmental degradation.

* If we fail to recreate nature on a massive scale in a manner that generates employment and equity, not only our villages but also our cities will become unlivable. Many people prefer to call the urban migrants economic refugees from the countryside—to my mind many of them are really ecological refugees displaced by dams, by mines, by deforestation, by destruction of grazing lands, by floods, by droughts, and what not. We are today the world's fourth largest urban population. Before the end of the century we will be the largest. Managing this huge urban population will call for extraordinary political and managerial sagacity, something we cannot learn from the rest of the world. But one thing is definite, if the process of urbanisation continues to create the same demands on our rural environment it will only accelerate the destruction of the rural environment and in turn make the urban environment impossible to manage. India cannot survive without a low-energy, low-resource input urbanisation. In its absence, no law or laws which try to turn the incoming ecological and economic refugees into our cities into criminals will work. Barbara Ward told the Stockholm Conference that if ecology teaches us anything, it is that we have only one earth, in which everything is related to everything else. I am today tempted to paraphrase her: we, too,

have only one nation, where everything is related to everything else. Only a holistic approach to our problems will work.

National awards to teachers

THE PRESIDENT, GIANI ZAIL SINGH, gave away the National Awards to Teachers for the year 1983 at a function in New Delhi last month.

One hundred and fifty nine (159) teachers were selected for National Awards of which 84 were primary teachers, 67 secondary teachers, five teachers of Sanskrit Pathshalas and three Arabic/Persian teachers of Madrasas as run on traditional lines.

Each award consists of a certificate of merit, a silver medal and cash payment of Rs. 1,500.

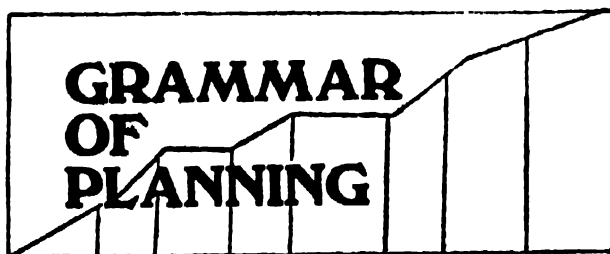
Of the 159 teachers selected for the award, 16 were from Uttar Pradesh, 14 from Maharashtra, 13 from Tamil Nadu, eight each from Andhra Pradesh, Bihar Madhya Pradesh and West Bengal, seven each from Gujarat and Karnataka, five each from Orissa and Rajasthan, four each from Assam, Haryana, Himachal Pradesh, Meghalaya, Punjab and Sikkim, and two each from Jammu and Kashmir, Tripura Andaman and Nicobar Islands Arunachal Pradesh, Chandigarh, Delhi and Pondicherry, and one each from Goa, Daman and Diu and Mizoram. Two teachers each from the Central Board of Secondary Education and the Kendriya Vidyalaya Sangathan, and one Arabic teacher each from Assam, Kerala and Uttar Pradesh, and one Sanskrit teacher each from Assam, Bihar and Orissa and two from West Bengal were also given the National Awards.

Europe to launch remote sensing satellite in 1989

Europe expects to launch its first remote sensing satellite in 1989. The £325 million project will provide global wind and wave information within three hours to offshore industries, shipping and those involved in oceanographic, fishing and other maritime operations.

ERS-1 will complement the U.S. Landsat satellites which have been "observing" the earth and supplying data and pictures since 1972 that include information about crop production, the availability of water, and the location of minerals.

The new European craft, will provide radar rather than optical images, and give information about global sea-state, sea-ice conditions and related processes.



The organisation of planning

P. R. Dubhashi

In the previous chapter, the author highlighted the substance of planning which consists of programmes of production and distribution in different sectors of economy. Here he discusses the various patterns of planning organisation, different in structure, strength, character and location in the administrative and economic system.

IF ANY NATION UNDERTAKES aggregative or comprehensive planning, it becomes necessary for it to consider the establishment of a suitable planning organisation. If planning is of an indicative type, a small organisation, as in France, consisting of highly qualified economists and technical personnel would be adequate. On the other hand, with the entire economy taken over by the state and with the system of imperative planning, an elaborate planning organisation, such as Gosplan in Soviet Russia, may become inevitable. However, even where the planning organisation is small, such are the ramifications of planning reaching throughout the economy that it becomes necessary for the planning organisation to set up numerous consultative bodies or working groups on which are represented major agencies, institutions and interests in the economic system.

A separate organisation

Where the country is large and has a federal organisation, it becomes necessary in addition to the planning organisation to set up a larger body representing both the constituent units and the federal government. There are different possible patterns of planning organisation—different in structure, strength, character and location in the administrative and economic system.

One point of view may be that there is no need for a separate planning organisation—but it must form

part of the government itself. In the latter case, point still arises whether the planning organisation should constitute a separate wing of Government or should form part of an established department. Thus one point of view is that the planning organisation must be in the personal office of the Prime Minister while another view is that it should form part of the Finance Ministry. A third view is that there should be a separate planning Ministry. In all these patterns, planning organisation will function within the framework of government administration. It is felt that such a set-up may not be conducive to the distinct and all-pervasive influence which planning must exert over the administrative and economic system, since the planning organisation would be subservient to the established organisation of which it forms a part. Only a strong separate organisation can spearhead the process of planning.

If a separate planning organisation is set up, its character and the nature of its functioning have to be decided upon. Should it be only advisory in character or should its decisions be mandatory or binding on all limbs of government? Should it be an expert body or should it have a political authority?

An advisory body of experts

It is not easy to answer the questions inasmuch as planning is a peculiar combination of economic arithmetic and political choice. Matters like input-output tables, material balances, manpower planning, consistency of targets and economic relationships—these and many others are obviously pure matters of technique and technology of planning. On the other hand, matters like choice between current consumption and future benefits, between high rate of growth with greater sacrifice of current consumption and low rate of growth with little sacrifice of current consumption, choice regarding sharing the burdens of planning, by different sections of the society, the extent to which means of production should be socially owned—all these inevitably involve wider issues and judgements which must require

decision-making by an authority which can claim to be representative of the nation as a whole.

If the separate planning organisation consists of persons who are only experts and who are appointed by those who exercise political authority with no inherent powers of their own, then obviously its functions are mainly in the realm of planning technology, i.e., preparation of framework and document of planning. The planning body must work out such plans within the framework of choice of the political authority. Such an agency, therefore, is purely advisory in nature and derives its advisory authority from its expert character.

In such a set-up, there is a fear that the advice regarding planning by such a politically neutral planning authority may be totally neglected by the governmental authority. One way out of this impasse is to make the planning authority consist partly of experts and partly of persons who yield political authority. Thus, as in India, the Prime Minister should be the Chairman of the Planning Commission, the Planning Minister its Deputy Chairman, and the Finance Minister as its member. An immediate disadvantage of this arrangement would be that the planning authority would lose its independent character and would act in a manner subservient to government and to political authority. Its economic arithmetic would be modified to the dictates of the political will.

Thus, whatever be the character of the planning organisation, it is likely to be caught up between the two evils—impotency and ineffectiveness on one side and loss of independence on the other. It is not easy to find out a *via media* between these two. A way out of this impasse is possibly the French pattern of planning organisation. There, the permanent machinery of planning consists of Commissariat general du Plan. It consists of Deputy Commissioner and Secretary-General and forty Councillors and heads of mission representing wide range of activities. It is a neutral organisation but neutrality is found to be advantageous since this has enabled it to emerge as a round-table for ministers—"a neutral ground where private interests, civil servants, and even different departments of one ministry can come together and air their differences, uninhibited by considerations of personal status.

The French Commissariat is not just an advisory or consultative body like the Dutch Planning Bureau or Council of Economic Advisers to the President of the USA. It is not divided from the executive. The Commissioner General, personally or through his representatives participates in the working bodies whose decisions are enforceable. Thus, Commissariat du Plan is something more than an advisory board and something less than a real centre for the coordination of economic policy.

If a separate planning organisation is set up, the question of its organisational strength and staff arises. Planning is a complex function involving economic, technical and administrative considerations. These have to be related to the entire gamut of the economy and the society in all spheres and

sectors. It is not a purely model-building exercise. It requires deep understanding of the policies and their implementation, programmes and their execution. Economic development is not purely an economic phenomenon. It is inevitably accompanied by vast social changes. A profound understanding of the sociological aspects as important as that of economic and technical intricacies. The Planning authority at the highest level, thus, must embody a wide ranging expertise in the fields of economics, finance, sociology, public administration and science and technology in all spheres, but specially in agriculture and industry.

The planning authority has to be adequately equipped with the staff. It is rightly stated that the staff organisation of the planning authority should not be on the lines of an organisation of regular governmental department. It should not be bound by hierarchy. Also, mere rules of seniority or regular procedures of recruitment would not be appropriate for staffing the planning organisation. It might be necessary for the planning organisation to draw, on a contractual basis, qualified persons from various fields including academic institutions and business and industrial organisations in addition to the government departments.

While planning is an all-pervasive activity, composition of the staff of planning organisation need not necessarily be paralleled to the governmental administration. This is likely to attract the criticism that the planning authority is a parallel government.

This is more so if the planning authority starts taking up bits of executive functions. The temptation to do so is considerable. But if the planning authority slowly takes upon itself some execution functions, it will lose the sharpness of its planning activity and would itself be a road-block in plan execution.

Staff strength

How big should be the staff of the planning organisation depend on the nature of planning. Indicative planning may require limited staff while comprehensive imperative plan would require a huge staff. Thus, the planning agency in France in 1963 had professional staff of about 35, while in India it was about 180. Gosplan in USSR has a much bigger staff.

The professional staff in French organisation of planning increased to 150 from original 35 after productivity councils were amalgamated with it in 1959.

There may be different patterns of the internal organisation of the planning authority. One suggestion is to divide the organisation into three parts—one responsible for plan formulation, another for plan supervision and monitoring and third for plan formulation, evaluation. In each of three parts, there has necessarily to be both sectoral and spatial work distribution.

All aspects of planning would necessarily require an efficient organisation for statistical and economic

analyses. As planning becomes more and more sophisticated, it makes greater and greater demand on date of various types. However, the work of data collection, monitoring and evaluation should not develop into a full-fledged research activity. It must be left to the academic and research institutions. This is what is done in France. There, the Commissariat works during the actual preparation of the plans in the closest possible association with several administrative bodies, such as the Department of Economic and Financial Studies in the Ministry of Finance, the National Institute for Demographic Studies and the Centre for Consumer Research, Study and information.

Inter-linking the groups

Another possible way of organising the work of the planning authority would be to divide it in different groups concerned with the perspective short term and annual plans. However, it is doubtful whether such a division in the work of the planning organisation would be appropriate. For each sector of planning, perspective planning, short-term planning and annual planning should be interlinked or else while perspective planning presents one picture of development, the short-term and annual planning would go on altogether different lines.

Since planning is essentially mobilisation of natural resources, financial resources, manpower resources and administrative organisation, it may be possible to divide the internal working of the planning authority into groups concerned with each of these types of resources.

The mere existence of a separate planning organisation would not do away with the need for planning functions within the regular departmental set-up of government. Thus, it is suggested that there have to be planning cells within each department. It would not, however, be proper to leave the work of the planning cells to a minor functionary. The head of each department must assume the responsibility for planning.

Though there may be a separate organisation for planning, for the actual preparation of plan, collaborative effort between it, the ministries of government and representatives of the various sectors of the economy is needed. Thus, in French planning system, plans are not prepared by its staff of 150. Between three to four thousand other people help to prepare them through the device of Modernisation. Commissions, Bauchet calls those Commissions, the real original feature of the French system. All these Commissions work in close collaboration with representatives of all social categories—government, and different branches of industry.

Whereas in Soviet Russia, government is subordinated to party organisation, the party organs must have their own planning set-up. Even in a democratic set-up, where party and government are distinct, parties must have their own forums in order to mobilise popular participation in planning.

State level planning

In India, the planning machinery at the state level is still in the process of evolution. A study of planning apparatus at the state level published in 1969 states: "States do not have planning machinery worth the name. Most States so far have tended to treat planning as a peripheral function to be performed by an official who has no special qualifications for it . . . The work of this official, generally has been to coordinate the schemes submitted by Development Department. It will be no exaggeration to speak of state planning as departmental planning. Because of the absence of an expert body like the Planning Commission at the state level, state plans have lacked definite objectives, priorities and inter-dependencies.

However the position is now changing. The planning Commission is guiding the states to set-up a full fledged machinery of planning at the state level. In addition to the planning Department, planning cells in development departments, the inter-departmental committees and the Cabinet Committees and the Cabinet Committees on Planning, the states like Tamil Nadu, Kerala and Karnataka have set up Planning Boards supported by properly qualified staff. The process has to continue at the state level and descend to the regional, district and local levels.

In a large country, the states or the republics would have necessarily to bear the responsibility for a considerable part of planning which may have to be decentralised to the state or republican level. Therefore, there is a need for a well-equipped planning organisation at the state or republican level. It may not be as elaborate a body as at the national level but it must have sufficient sophistication to take up planning on its own. Otherwise a weak body at the state level not be able to bring to bear on the process of planning an informed judgement about the local needs and resources. A weak planning organisation at the state level would necessarily lead to reduction of the planning function to mere compilation of department schemes.

As the planning function descends to the field level, the distinction between the plan formulation and plan execution, planning organisation and departmental organisation ends to be blurred. However, the need for some specialism and expertise in planning at the regional and local levels is strongly felt. Epilepsy at the centre and anaemia at the periphery will not be conducive to the planning in depth.

The weakness of planning machinery at the regional and district levels is not only a feature in India but in other countries as well. Bauchet point out that it took seven years to prepare in 1962 regional plans in France, known as "Regional Plans for Economic, Social and Territorial Development" largely owing to the absence of any regional economic administration. In an attempt to set up a suitable geographical framework, each district has now set up a permanent organisation to study and coordinate public utility programmes and the implementation of regional plans. One of the prefects, known as the 'coordinating prefect' acts as its chairman.

(Continued on page 34)

You and Your Health

Methods of birth control Choice is yours

Prof. Vera Hingorani

More and more couples are realising the advantages of having a small family. Good health, education and general welfare of the family members can be ensured only if their number is small. Here are the methods available to the couples who want to keep their families small.

INCREASING NUMBER OF PEOPLE are beginning to realise that for the welfare of the family and nation, the family should be of small size. Welfare of the family should include good health, good living and good education.

Size of the family

Our slogan "we two and our two" appears to be appropriate irrespective of the sex of the children. Our constitution does not discriminate between the two sexes and we all should collectively endeavour and see that this discrimination between the sexes that exists in our social system is removed.

Just as we protect ourselves from nature i.e. from rain, heat and sun with umbrella, clothes and house, the same way we can protect ourselves from unwanted children by using effective and reliable methods of birth control which are available now.

When to marry ?

For the girls, age between 20—25 years is appropriate for marriage as by then growth is fairly complete. Though some who for academic reasons have delayed it further, may not have really suffered much because of the delay.

Between 20—30 years is the best time for women to have their two children and preferably the first one should be born between 20—25 years, as everything is favourable for the first delivery during that time, though for any particular reason, if it is to be postponed, then with good care, results can be almost as good.

When a woman gets married around the age of 20 years and does not want to have the first child for a few years what is the best contraceptive? If she is interested to have something that is foolproof and practically 100 per cent effective, then she should take the oral contraceptive pill regularly i.e. a three weeks course of one pill daily, starting on the 5th day of the menses. After three weeks course she has to stop it for one week. During this time she will have the menses and then she starts again on the 5th day of menses.

She has to strictly follow this schedule, as forgetfulness to take a pill can lead to conception. This risk can be reduced if missing a single pill is made up by taking two pills the next day. However, for all women this method may not be advisable as a blanket precaution as there may be certain contra-indications to the use of the pills in the following conditions :

- (1) Known cases of heart disease or epilepsy
- (2) Recent Jaundice
- (3) Patients with diabetes or high blood pressure or kidney disease
- (4) Patients with history of thrombosis
- (5) Patients with menstrual disorders—heavy or scanty or irregular periods
- (6) Any malignancy
- (7) Any other major medical or surgical problem

It is advisable to have a consultation with a Gynaecologist before starting this contraception (the pills) and then see the doctor periodically i.e. yearly. Periods tend to become scanty after the pills, and if they stop altogether then doctor should be consulted and another method may be adopted.

What is the alternative method available for the persons for whom the pill is not suitable and also for those who may not be keen on 100 per cent effective method? Such couples can practice the use of the conventional methods i.e. condom for man with spermicidal jelly for the wife, or use of diaphragm for the woman which is used alongwith the spermicidal jelly. These methods when used in safe period, with practice of abstinence in the dangerous (fertile) period, can be highly effective contraceptive methods. Since use of

condom does not require doctors to do the fitting as is required by diaphragm, condom therefore remains the most common though least effective method of contraception.

In Western countries, where there is lot of promiscuity, very small intrauterine devices have been developed for use by women wishing to postpone the first pregnancy. We do not recommend this, and advise this only to women who have proved their fertility with atleast one child, because of the small risk of infection which is associated with the use of this device. This may sometimes cause infertility.

Contraceptives for spacing

Breast feeding is encouraged for all mothers as it is not only good for the mother but also for her baby. Breast feeding, apart from reducing the risk of cancer-breast and cancer-body of the uterus, also works as effective contraceptive method for initial 3-6 months, specially for mothers, whose babies receive only mother's milk and are fed frequently (2-3 hourly). However, to play safe contraceptive protection is required and for practical purpose intrauterine contraceptive device, inserted 8-10 weeks after delivery, will give her good protection. This is considered as best contraceptive at this time, as while she is breast feeding, she may not be menstruating and by the time she weans the baby or starts her periods after delivery, the device has nicely settled down and does not cause excessive bleeding which otherwise is one of the common side effects of intrauterine device.

Alternatively, if she prefers to have hormonal contraception, she can take the pills but only after the baby is six months old. She could also take two monthly *Net* injections which are available at large centres after she has resumed the menses. Condoms with cream or diaphragm with cream available at all centres, may be used during the time before intrauterine contraceptive device (IUCD) is fitted or hormonal contraceptive is started, or may be used only as a third choice.

Terminal methods

For those couples who have completed their family, who should be operated—husband or wife? For all practical purposes, vasectomy is a simpler, smaller operation done under local anaesthesia as outdoor procedure when a man can walk in for it and walk out after it. WHO studies have shown that the men who had vasectomy performed 10—20 year earlier were in better health than the control group of men of the same age, who had not had this procedure. In spite of these facts, in our country, except in 1976, more women have accepted operation on themselves. They are highly motivated to go through it, as it is they who suffer the inconvenience and the risks of unwanted pregnancy. The operation can be done after delivery or after abortion, or as an interval method. As an interval method or when combined with the abortion procedure, laparoscopic operations have been quite popular.

Idea of safe period, also called Belling Method, is based on the fact that in a woman who menstruates regularly i.e. every 28 days, her ovum is formed around

14th day from the 1st day of the menses. Since ovum can live only for 24 hours and if she can avoid sex for a period of one week that is three days before and three days after the ovulation, perhaps she may escape getting pregnant, even though she has sex at any other time without using any other contraceptive method. In Belling Method, she begins to recognise the beginning of formation of the egg which is associated with clear mucoid vaginal secretion. This method has rather, high failure, rate as firstly, it calls for abstinence during the critical period, and secondly, some common vaginal infections can effect the nature of vaginal discharge. In highly motivated women good results have been claimed in "Belling Method."

New devices

A few new methods in contraception are presently under trial. These are likely to be available for general use in near future.

1. Net INJECTION—monthly or two monthly.
2. NET with Fstrogen injection—monthly.
3. NORPLANT—expected duration of use 3-5 years.
4. Hormone containing vaginal rings for use—1-3 months.
5. Hormone containing IUD
6. IUD with larger amounts of Copper than Copper T device to last longer and IUD with silver.

Methods now under trial and may be available in distant future:—

1. Vaccine for female.
2. Vaccine for male.
3. Hormone preparation for male.
4. Hormones to be administered in minute doses by nasal spray for both male and female.
5. Device in vas for male.

(Based on a public lecture series of All India Institute of Medical Sciences, New Delhi).

(Continued from page 32)

Where plans are the joint responsibility of the central and state governments, a supreme organisation representing the highest political authority at both levels as well as of the planning authorities becomes necessary. In India, such an organisation has been constituted in the form of the National Development Council.

In a system of parliamentary democracy, parliament and its committees would have to create opportunities for reviewing formulation and implementation of the plan by the executive. In France, parallel to the parliamentary supervision, is the supervision by Council Economique et Social in which are represented different social and professional categories. A similar organisation at the state level is necessary to involve the local government institution at district and local levels in the process of planning.

(Next issue : The Implementation of Planning)

AN INDIAN INSTITUTE OF Port Management is being set up at Madras to impart training to middle level and senior level port managerial personnel. The Institute will enable the ports to keep pace with the rapid changes in technology relating to shipping and ports in the world. A major effort is required in building up ports management cadres and providing them specialised training in various fields specially those related to port operations, containerisation, etc.

There are 10 major ports in India, five on the Eastern Coast, namely, Calcutta/Haldia, Paradip, Visakhapatnam, Madras and Tuticorin and five on the Western Coast, namely, Cochin, New Mangalore, Mormugao, Bombay and Kandla. The 11th major port, namely, Nhava Sheva will be constructed near Bombay. There are about 2,800 middle and senior level managerial personnel in all these ports. When the Nhava Sheva Port becomes operational, this number will go up further.

The Institute Board will include representatives from the major ports, Planning Commission, Port User Interests, Shipping Industry, etc. The setting of the Institute will involve an initial capital investment of about Rs. 6 crores and a recurring cost of about Rs. 50 lakhs per annum.

PRODUCTION OF OILSEEDS achieved a record level of 128.1 lakh tonnes in 1983-84 as compared to 93.7 lakh tonnes in 1980-81 and 105.5 lakh tonnes in 1982-83. The production of oilseeds in 1981-82 touched the 121.9 lakh tonnes mark.

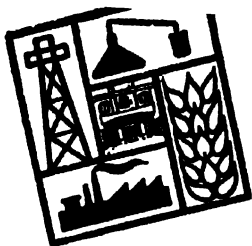
Oils and fats, apart from forming an essential part of human diet, serve as important raw materials for manufacture of soaps, paints and varnishes, hair oils, lubricants, auxiliaries and pharmaceuticals. Oilcakes and deoiled meals are also used as animal feed and manure. Groundnut and soya bean deoiled meals are sources of high quality protein to both human beings and livestock.

Realising the need for increasing the oilseeds production, the oilseeds development programmes have been revamped by integrating the various schemes and fragmented programmes into a compact National Oilseeds Development Project launched this year. Liberal subsidies for farmers on various critical inputs have also been provided.

A National Oilseeds and Vegetable Oils Development Board was set up in 1983, for achieving proper coordination of all policy and planning matters relating to oilseeds production and vegetable oils. A decision has also been taken to set up a National Institute for providing facilities for testing and training in quality control as well as extension facilities in oilseeds production.

There are good possibilities for increasing the production of oilseeds as the newly developed varieties like JL-24 of groundnut, Pusa Bold and Varuna of rapeseed-mustard, Ankur and Gaurav of soya bean, Morden and BSH 1 of sunflower hold promise. Package of practices and plant protection schedules developed by the research institutions also offer considerable scope for increasing the production.

It has been observed that the area-approach gives a fillip to the production as demonstrated through the special projects for groundnut in Gujarat and soya bean in Madhya Pradesh. This experience is now being extended by organising special projects for four crops, namely, groundnut, rapeseed-mustard, soya bean and sunflower in 12 states.



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Energy strategy in
Seventh Plan

Yojana

DECEMBER 1-15, 1984 RUPEES 1.50

Television goes
to villages

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Strategy for removal
of poverty

Crude production up by more than 12 per cent

CRUDE OIL PRODUCTION in the country during the first half of the current financial year (1984-85) was 13.878 million tonnes marking an increase of 12.3 per cent over the production of 12.363 million tonnes in the corresponding period of 1983-84.

Of the total output, Oil and Natural Gas Commission (ONGC) produced 12.477 million tonnes and Oil India 1.401 million tonnes. ONGC's production was 14.5 per cent more than the figure of April-September period of 1983-84.

Oil production from the Bombay High off shore by ONGC registered a 16.8 per cent increase with 9.479 million tonnes during the April-September period of current financial year compared to 8.113 million tonnes of the corresponding period of last year.

ONGC's onshore production from Gujarat and Assam fields also showed increase of 9.3 per cent and 4.6 per cent respectively compared to the corresponding period 1983-84.

The 12 refineries in the country produced 16.9 million tonnes of petroleum products during the April-September period compared to 17.146 million tonnes during the corresponding period last year. The slight decrease in refinery production was due to the Cochin Refinery shutdown for reconstruction following the fire of March 1984. []

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Energy strategy in Seventh Plan

S.L. Khosla

The author here deals with the energy scenario in the Seventh Plan and says that apart from accelerated use of conventional energy sources efforts would be stepped up to tap new sources of energy such as biogas, wind-mill and solar energy. Besides, overall energy intensity of the economy would be reduced and research and development intensified.

THE ENERGY STRATEGY during the Seventh Plan will have to be viewed in the context of the Sixth Plan targets, shortfalls and slippages. The Sixth Plan document indicated accelerated exploitation of domestic conventional energy resources, such as oil, coal, hydro and nuclear power; management of oil demand; energy conservation; exploitation of renewable sources of energy like energy forestry and biogas especially to meet the energy requirements of rural communities; and intensification of research and development in emerging energy technologies.

Review

Before we proceed to the "Approach to the Seventh Plan", we may review as to what has happened since the beginning of the Sixth Plan.

In oil the production has gone up from 11.76 million tonnes in 1979-80 to 26.03 million tonnes in 1983-84. The target for 1984-85 is 29.63 million tonnes. As a result, our self-reliance on indigenous oil production which was only 37 per cent in 1979-80 will increase to about 73 per cent in 1984-85. This has also improved our balance of payments position. As regards coal, the production was 103.95 million tonnes in 1979-80 and is expected to be about 150 million tonnes in 1984-85. The installed capacity in power was 28448

MW at the beginning of the Sixth Plan and is likely to be 42759 MW by the end of the Plan.

Consumption of oil products has increased from 29.88 million tonnes in 1979-80 to 35.60 million tonnes in 1983-84. It is substantially less than the consumption of 45.50 million tonnes in 1984-85 envisaged in the Sixth Plan. Though the demand for coal was expected to be 168 million tonnes in 1984-85 it will now be about 155 million tonnes. There have been shortfalls in the demand for coal by steel, railways, cement and fertilizers. The balance between production and demand will be met from the huge pit-head stocks. The generation of electricity was envisaged in the Sixth Plan at 191 billion units in 1984-85 compared with the actual generation of 112 billion units in 1979-80. Actual generation is now anticipated to be 164 billion units. On an average there was a shortage of about 10 per cent every year.

Instead of there being acceleration of hydel development, its share in the installed capacity has fallen from 41 per cent in March 1979 to about 33 per cent in 1983-84. The modest target for nuclear power will fall short due to the slippage of the Madras Unit. Its share in the total installed capacity will marginally increase to 2.6 per cent by the end of the Sixth Plan.

In the field of energy conservation, except in the sphere of oil consumption, not much impact could be made on electricity and coal consumption. However, an inter-ministerial group has recently completed a comprehensive study which indicates that with an investment of Rs. 5140 crores on conservation measures, it is possible to save annual expenditure of Rs. 3110 crores. Investment required to produce equivalent energy would be Rs. 7980 crores.

With the establishment of the Commission for alternative sources of energy and the Department of New Sources of Energy, Biogas, Wind Energy, Solar Energy, Geothermal energy, etc. have received concentrated and

Views expressed in the article and of the author and not necessarily of the Planning Commission where he works.

Undivided attention. As a result 3 lakh units of biogas, 1300 windmills and some solar devices are expected to be commissioned during the Sixth Plan.

Just before the beginning of the Sixth Plan, the Planning Commission had with it the Report of the Working Group on Energy Policy. It had envisaged that as compared to the respective shares of electricity, oil and coal at 26.1 per cent, 45.8 per cent and 28.1 per cent in 1975-76, we should achieve in 1982-83 shares of 33.0 per cent for electricity, 42.1 per cent for oil and 24.9 per cent for coal. In actual effect, the shares have been 30.6 per cent for electricity, 48.0 per cent for oil and 21.4 per cent for coal. The dependence on oil has increased.

There are also other important developments during the Sixth Plan which we should take note of. No major discovery of oil was made. As a result the reserves/production ratio has been declining though at present it is still above the reasonable norm of 15 : 1. Despite the oil prices being higher by about 8 per cent than the import parity prices, the consumption is still rising by about 6 per cent per annum as against the average of 4.2 per cent for less developing countries and negative growth of about 3 to 4 per cent for the developed countries. Though coal is the primary source of energy in the country because of its abundant resources, sale of soft coke used in the domestic sector has fallen from 3.70 million tonnes in 1980-81 to about 2.0 million tonnes in 1983-84. The domestic share is about 2 per cent to 3 per cent of the total production as against over 18 per cent in China. The utilisation capacity of the thermal plants has not improved and is expected to average 48 per cent as against the level of 56 per cent achieved earlier in 1976-77. The Committee on Power has suggested that the norm should be 58 per cent.

Energy strategy in Seventh Plan

It is largely against this background, the 'Approach to the Seventh Plan' spells out the main thrusts in the energy sector. These are :

- (a) To plan for a gradual transition from the present dependence on oil to coal and electricity in the medium term and renewable sources of energy in the long term. Even though current contribution of renewable energy sources to energy supply is insignificant and many of them are not commercially competitive at the moment, these technologies will have to be developed now, so that the transition in future will be smooth.
- (b) In view of the growing scarcity of fuel wood in the rural areas, which is the main fuel for cooking, there should be a minimum needs programme of energy supply to the seriously affected rural areas.
- (c) To reduce consumption of energy for domestic cooking, efficient chullahs should be developed and popularised with the help of official and non-official agencies.

- (d) Overall energy intensity of the economy should be reduced, the efficiency with which energy is utilised should be increased and the desirable patterns of fuel consumption promoted. Energy consumption will be an important parameter in deciding on new investments. Statutory as well as promotional measures including energy audits of energy intensive industries will be taken up during the Plan period and financing of energy-conservation investments should be given preferential treatment.
- (e) The choice between alternative modes of transport should be based on comparative resource—cost advantage with appropriate weightage given to energy.
- (f) Increasing the capacity utilisation and increasing the productive efficiency of capacity already created.
- (g) So far management and investment concerns have been concentrated only on centralised energy systems. This has now to be complemented by a commitment of equal magnitude and seriousness to the development of decentralised energy systems.
- (h) Indigenous research and technological activity in the energy sector was unsatisfactory. Organisation and institutions charged with this responsibility will have to be reinforced and strengthened, in particular the agencies in charge of new sources of energy.
- (i) In the oil sector, measures will be intensified to control the growth rate and in particular the consumption of middle distillates. Alternative fuels for kerosene will be arranged. Detailed unit level studies will be carried out for substituting oil. Exploratory efforts to find more oil will be intensified. While flaring of gas will be minimised, a review of the existing policy on gas utilisation will be undertaken in view of the increase in the recoverable reserves of gas.
- (j) There is universal criticism of the functioning of the State Electricity Boards. Steps will be taken to restructure and strengthen them so that they function in a business like manner. Capacity utilisation of thermal stations will have to be improved. Greater emphasis will be put on hydel projects and their construction expedited by using modern techniques and equipment. The pace of exploitation of small hydel will be expedited by special measures. Transmission and distribution system will be strengthened to ensure proper evacuation of power and to reduce losses. There is need to increase household electrification from the present level of about 18 per cent. With the adoption of higher sized generating units, the need for proper training of personnel at all levels has been emphasised.
- (k) In the coal sub-sector, there will be increased application of modern technologies in view

of the requirement to step up production from about 150 million tonnes in 1984-85 to about 230 million tonnes in 1989-90. One of the causes of project slippages is the mistake in geomining assumptions. Exploration techniques will therefore be improved to yield accurate data and at a faster rate. To avoid movement of coal across the country, exploration for coal near the consuming centres will be expedited. The present anomaly of coal stocks accumulating at the pitheads with scarcity of coal in certain areas and complaints on coal quality will be removed through refinements in demand forecasting and effective linkages between consumers and the coal mines. Mention has also been made about R & D on insitu coal gasification with a view to exploiting the huge coal reserves found in Gujarat but in greater depths and on transportation of coal by slurry pipelines.

- (1) On new sources of energy, the Approach document calls for widespread use of biogas and R & D efforts to reduce the construction costs and improve the operational efficiency. There should be speedier application of solar energy where its use is already competitive. R & D works will also be intensified on geothermal and ocean energy and to extending the range of application of wind energy. Municipal and Industrial wastes processing schemes will receive emphasis. In fact a beginning has already been made with an incinerator project using town refuse in Delhi.

Priorities in investments

It would be seen that priority will be on increasing productivity, better management, balancing investment and energy conservation. In the coal sub-sector better returns from the investments can be obtained by improving project implementation. As in March 1984, 71 projects were delayed and 41 for over 3 years. Actual coal production for these 71 projects was only 59.36 million tonnes as against the scheduled production of 82.15 million tonnes throwing out of gear the entire production planning and resulting in taking up for investment sub-optimal projects to make up for the shortfall in production. Productivity as measured in output per manshift is only 0.53 tonnes for underground mines and 1.96 tonnes for opencast mines. Corresponding international figures would be 1.6 to 3.5 tonnes for underground mines and 15 to 25 tonnes for opencast mines. Low productivity is partly the result of excessive manpower employed, little mechanisation in underground mines and poor management of costly mining equipment. Due to lack of timely repairs, mismatch with the other complementary machines, poor operating skills of workers, poor haul road maintenance, equipment utilisation is also low. This has assumed importance with the production from the opencast mines going upto 58 per cent in 1989-90. With some care in mining and coal handling, quality can be improved

and matching coal supply with consumer requirement, the capacity utilisation in other sectors will also go up with lesser expenditure on plant and equipment maintenance.

Power sub-sector

In the Power sub-sector, capacity utilisation of thermal plants has to be improved. A quick calculation revealed that if in 1981-82 and 1982-83 the performance of the thermal stations had been as good as in 1976-77 there would have been hardly any power shortage. Moreover we could have saved to the tune of Rs. 3000 crores on investments in new additional capacity. So badly are we caught up in a vicious circle of power shortages that only 45 per cent of boiler units are actually overhauled without delays. And negligence in maintenance of boilers, turbo-generators etc., leads to still higher forced outages and consequently lower PLF. Government has recently approved a renovation and modernisation scheme of certain categories of thermal power stations. With an expenditure of Rs. 500 crores over a period of 3 years, generation will be increased by 7000 million units which otherwise could have been generated by additional capacity costing Rs. 1400 crores. Inadequate investment on transmission and distribution has proved costly. New generating units have recently come up and they had to be shut down in the absence of adequate evacuating facility. This has also resulted in higher line losses of 21 per cent as against about 10 per cent in developed countries. Investment on removing the weaknesses in transmission and distribution should receive priority because it is a more economical way to increase power supply than by adding to capacity. Except for the projects of National Thermal Power Corporation and a few other solitary examples, most of the power projects are considerably delayed. Delays result in cost escalation, damage to the exposed equipment, locks up capital and deny timely benefits with serious consequences.

Emphasis on exploration

In so far as the oil sub-sector is concerned, the first priority will be exploration. Foreign participation for exploration by its very nature will be limited. It is proposed to step up exploratory meterage from 354700 metres in 1984-85 to 1270700 metres in 1989-90, an increase of 358 per cent during the Seventh Plan period. As a result drilling density which was at the end of the Sixth Plan 1 well in 960 sq. kms. will become at the end of the Seventh Plan only 1 well in 480 sq. kms. This compares to 1 well in 15 sq. kms. in the U.S.A. This has become necessary if we are to remain self-sufficient. The balance recoverable reserves of oil are only 526 million tonnes which should last us about 17 years unless we also add to the reserves. Another way of increasing recoverable reserves is to extract more from the reservoirs. Average recovery factor for ONGC is about 21 per cent of the geological in-place reserves, as compared to 33 per cent for USA and 42 per cent for USSR. This increase could come through provision of additional facilities like platforms, early introduction of water injection, pressure maintenance schemes and enhanced oil recovery projects. While this will receive priority, de-

(Continued on Page 27)

Currency and exchange profile after Independence

S. K. Ray

Exchange control is an instrument of monitoring a healthy growth of both absolute and hard-core contents of exports mix vis-a-vis imports, so that there should be a sound rise in exchange surplus and a balanced structural growth of the economy. The extent to which India has been able to achieve these objectives in recent years has however been limited, says the author.

WITH THE ADVENT OF independence in 1947, the currency and exchange infrastructure was found riven with a number of distortions. Firstly, there was substantial pool of sterling balance, but this was mostly frozen in Great Britain for uses serving mainly the British interests. Secondly, India was still suffering from the backlash of the inflationary spiral let loose by war expenditure, and heightened by multi-pronged spending which had burgeoned after the war. Finally, the economy and the exchange counters were both extensively ridden by war-time and post-war exchange controls. The need for reform was therefore, both urgent and essential.

Activating sterling balances

I have briefly indicated earlier (please see issue 16-31 October) how sterling balances had in a way de-stabilised the economy, and how this eventually led to war-time inflation. The British manoeuvres with sterling balances both in UK and India, had substantially contributed to inflationary pressures during the war mainly due to wanton war expenditure, and after the war, due to spending under

taken in abandon with the cessation of controls and regulations.

After independence, India had genuinely banked upon the precious sterling balances for her developmental requirements. But in practice this was not to be. India had soon enough discovered that the British Government was in reality quite reluctant to deblock the sterling balances for use as developmental finance for Indian economic growth, or for use as exchange reserves to India's terms or to suit her requirements. The British strategies had always meant to ensure that these balances were actually used to serve British interests and mainly British exports to India.

India unfortunately had by and large acquiesced to such econo-political British manoeuvres, and had imported much more from Britain, and through Britain, including foodgrains and consumer goods, than exported thereto, and adjusted the difference generally against sterling balances.

A succession of agreements on sterling balances were entered into in 1947, 1948 and 1951. It appears from a hindsight that India had agreed to such unfavourable agreements patently tilted to the interests of Great Britain under the influence of an euphoria of good Commonwealth relations.

Thus, for instance, much of the valuable sterling balances were set off against war-disposal stores and ammunitions left behind in India; capitalisation of pensions and other dues of British civilian and army personnel; and bulk purchases from Great Britain and through sterling balances.

Under these agreements Great Britain was able to largely abrogate and adjust their sterling balance obligations by dumping their unwanted manufactured and consumer goods and technologically out-of-date machine implements and electronic goods

into the vast Indian market. Large-scale purchases of foodgrains were also arranged through Great Britain against payments in sterling-balance adjustments.

The British Government was also successful in converting their own rupee dues from the Government of India into sterling, and set it off against the already much abused sterling balances.

Cavalier fashion

The two essential and hard-core uses to which India had miserably failed to put the sterling balances were to finance trade with hard currency areas; and to bolster a sound exchange reserve in sterling. On the contrary, India was rather quick to plough through the sterling balances in a cavalier fashion, so that by the final year of the First Five Year Plan in 1956, the whopping sterling balances had already been whittled down even below the prescribed minimum of Rs 400 crores.

Containing war-time inflation

The unabashed issue of paper currency during the Second World War to finance non-productive war expenditure on the strength of sterling balances was as expected accompanied by expansive rise of bank credit. This is indicated in the table below.

TABLE 1

Catalytic rise in paper currency and demand deposits with the banking system

	(Rupees in crores)	
	Paper currency	Demand deposits
1939	170	141
1945	1,085	600
	+915	+459

Source : Reserve Bank of India—Annual Reports on Currency and Finance.

It was a tremendous rise by any standard within a period of only five years. Apparently, however, the paper currency was unmatched by collaterals and economic growth and therefore the rise in demand deposits was less than proportionate.

As I said earlier, the simmering forces and pressures of inflation could not actually run riot during the war years in view of two principal restraining factors. Firstly, money was siphoned from the market for war efforts by rigorous and stringent measures. Secondly, there was enforced inflation of consumption for the vast multitude due to extreme shortage of consumer goods and necessities which were largely remitted to feed the armed forces. Only the nouveaux rich had an ostentatious living. Control and rationing helped to foster the privation of the multitude.

Spending however sprouted up after the war in an unabashed manner. More consumption goods and necessities also became available, with the cessation

of war-requirements, larger outputs from indigenous industries, and also large imports of foodgrains and consumer goods, some financed by sterling balances. India also had adopted economic planning with many projects having long gestation periods from the Second Five Year Plan onward.

All these factors had worked together in a constellation effect to add a measure of permanence to the continuity and upswing of the inflationary curve in the post-war years and during the development decades after independence.

After independence exchange control arrangements were gradually improved and embellished to suit the requirements of independent India, under the surveillance of the Exchange Control Department of the Reserve Bank.

Deficit budgeting

Deficit financing means resource mobilisation outside internal generation of resources and external borrowing. In effect therefore deficit financing signifies creation of uncovered paper currency and bank deposits.

Budgeting by deficit thus directly contributes to an expansion of money supply through an expansion of paper currency on the one hand and bank credit on the other. The expedient is a rather simple two-pronged logistic: the deposits are funded by large-scale borrowing from the Reserve Bank through loans, advances, or sale of securities or treasury bills to the Reserve Bank; and such deposits are also arranged by similar sale of securities to the commercial banks; this procedure has now become convenient for the Government with the emergence of the public sector banks.

During the Five Year Plans, deficit financing has been undertaken by the Government in a steadily growing pattern, the volume having shot up to Rs. 5,000 crores during the Sixth Five Year Plan.

TABLE 2

Deficit financing during the Five year Plans

Plan period	(Rupees in crores)	
	Outlay envisaged	Deficit financing undertaken
First Plan	2,356	333
Second Plan	4,600	848
Third Plan	8,577	1,133
Interim Plan (1966-69)	6,756	682
	(only three years)	
Fourth Plan	16,160	2,060
Fifth Plan	39,303	1,354
Sixth Plan	97,500	5,000

Source : Reports on Currency and Finance-1980-81, 1981-82 and 1982-83, Volume II, Table 77-B.

The impact on the inflationary spiral has been clearly manifest. With cascading increases in deficit

finance there has also been catapult rises in inflation. The seventies particularly in the second half have been highly worrying. The situation has further worsened in the early eighties.

The Government has from around the mid-seventies (1974 registered a 60 point rise in whole sale prices; monthly rise 2.5 per cent) adopted multi-faceted monetary, fiscal and price-regulatory measures, and these have helped in somewhat containing inflation during 1974-75 and 1978-79.

The rate of rise, called modest by the Government, but not by economic analysts, however persisted, and there were spurts of price rises during 1980 and 1981. But during the year July 1981-June 1982, the wholesale price index for all commodities (1970-71 = 100) registered a rise of 2.5 per cent from 280.7 to 287.8.

Overall the inflationary fever of prices has continued unabated and on a rising profile, and both average and percentage rises have been persistent and worrying. This is reflected in table 3.

TABLE 3
Movement of wholesale prices (1970-71=100)

Year	Index Number of all commodities	Percentage rise over previous year
1971-72	106	+21
1972-73	116	+9
1973-74	140	+21
1974-75	175	+25
1975-76	173	-1
1976-77	177	+2
1977-78	186	+5
1978-79	186	+0
1979-80	218	+17
1980-81	257	+18
1981-82	281	+9
1982-83	288*	+2*

*Provisional

Source : Reserve Bank of India—Report on Currency and Finance, 1982-83 Volume II, graph on 'selected economic indicators: price indices'.

With extensive borrowings abroad and recurrent deficits in balance of payments, another marked characteristic of post-independence currency and exchange system has been the mounting deficits in balance of payments.

The prospects of balance of payments have been estimated by the World Bank. The picture is rather grim as shown in table 5.

As a result, India's foreign exchange reserves which have been building up from Rs. 610 crores in 1974-75 to Rs. 1,492 crores in March 1976, and to Rs. 5,636 crores in September 1979, have been followed in later

years by steady and continuous erosions. The reserves fell to Rs. 3,133 crores in October 1982, lowest in recent years, and came up to Rs. 3,682 crores in January 1983. They increased to Rs. 4,805 crores (provisional) in June 1983, but even the Rs. 5,636 crores achieved in September 1979 now looks like a far cry.

The depletions of foreign exchange reserves has led to recurrent changes in the currency and exchange legislation under the Reserve Bank of India Act. All these legislations have been in the nature of providing a statutory sanctity to a fait accompli. It became difficult to keep the exchange reserves from falling, and faced with the requirement for finding collateral for issue of paper currency, the Government started taking liberties with established norms. The holding of foreign exchange resources is considered a sound and necessary collateral for paper currency in circulation. In India, with steady depletion in foreign exchange reserves and holding of foreign securities, this position was being continuously reversed.

Essential features

To conclude, the essential features of the currency system adopted by the Central Government of India *as of today* may be briefly indicated as in the subsequent paragraphs.

The currency system is based on a dual mechanism of rupee coin (unlimited legal tender) and part rupee coins (limited legal tender). In the minting of rupee and part-rupee coins Cassel's meaningful statement is relevant : "The mint was pitted against the smelting pot, and the coin produced by so much patience and skill by one was rapidly reduced to bangles by the other." Whenever their intrinsic worth was higher than the legal tender value, they tended to disappear in the melting pot. Indian cities and towns seem to be presently going through such a phase.

It has been indicated by the Reserve Bank of India that 'the total value of rupee coins and subsidiary coins in circulation amounted to Rs. 213 crores in 1960-61 and Rs. 686 crores in June 1983.

There has been a continued and catapult rise in the availability of money supply with the public. This is indicated in Table 6.

The implications of such a rise are easy to appreciate. When such money are backed by collaterals and economic growth, there is prosperity and rise in income per capita, but when it is not, there is rise in prices and increasing pressures of the parallel economy over the official.

The 'proportional system' of maintaining collaterals (viz. 40 per cent in gold bullion and sterling securities, and 60 per cent in rupee coins, rupee securities, eligible bills of exchange and promissory notes) of yesterday, as I have already mentioned, has been largely diluted today.

Today, we follow what is known as 'the minimum reserve system of note issue', and the collateral

TABLE 4

India's Balance of Payments : 1950-51 to 1979-80

(Rs. crores)

	1950-51			1960-61			1970-71			1979-80		
	Credits	Debits	Net	Credits	Debits	Net	Credits	Debits	Net	Credits	Debits	Net
CURRENT ACCOUNT												
(a) Merchandise trade (i+ii)	647	650	-3	630	1,106	-476	1,403	1,720	-317	6,201	9,576	-3,375
(i) Private	634	476	+158	624	644	-20	1,402	646	+756	1,181	4,838	+1,343
(ii) Government	13	174	-161	6	462	-456	1	1,074	-1703	20	4,738	-4,718
(b) Services & transfers	139	98	+34	260	178	+76	488	502	-93	4,555	1,415	+3,151
Net position on current account (a+b)	786	747	+32*	890	1,283	-399*	1,892	2,223	-410*	10,755	10,990	-224*
CAPITAL ACCOUNT												
(c) Private												
(i) Long term	14	27	-13	46	27	+19	39	68	-29	94	134	-40
(ii) Short term	2	2	-	5	8	-3	1	2	-1	-	-	-
(d) Banking	38	16	+22	44	34	+10	44	52	-8	206	288	-82
(e) Official												
(i) Loans	8	-	+8	257	16	+241	659	157	+502	982	87	+895
(ii) Amortisation	10	13	-3	3	38	-35	2	190	-188	3	479	-476
(iii) Miscellaneous	13	30	-17	144	37	+107	387	341	+46	632	336	+296
(iv) Reserves	50	79	-29	83	29	+59	320	231	+89	863	1,232	-369
Net position on capital account (c+d+e)	134	166	-32	582	183	+399	1,451	1,041	+410	2,781	2,557	+224
Current account deficit as % of GNP				2.67			1.03			0.21		

TABLE 5.
World Bank Estimates/Projections of India's Balance of Payments : 1980-81 to 1984-85

(US \$ million)

	Estimates		Projections		
	1980-81	1981-82	1982-83	1983-84	1984-85
1. Exports (f.o.b.)	8,700	8,700	10,000	11,600	13,500
2. Imports (o.i.f.)	-15,838	-16,000	-17,500	-19,500	-21,750
3. Trade balance (2-1)	-7,334	-7,300	-7,500	-7,900	-8,250
4. Non-factor services					
Exports	2,354	2,558	2,957	3,423	3,958
Imports	-1,632	-1,643	-1,795	-1,996	-2,219
5. Resource balance (3+4)	-6,612	-6,385	-6,338	-6,473	-6,511
6. Net investment income	370	212	-147	-349	-482
7. Current transfers	3,079	1,840	1,984	2,142	2,303
8. Memo item : Net invisibles	4,171	2,967	2,999	3,220	3,560
Current account balance (5+6+7)	-3,163	4,333	4,501	-4,680	-4,690

Source : *Basic Statistics Relating to the Indian Economy Volume I*, August 1982; Centre for Monitoring Indian Economy, Bombay.

TABLE 6
Money supply with the public

Year	Aggregate rise	Annual Absolute rise	Annual Percent-age rise
1951-61	853	85.3	4
1961-71	4,472	447.2	15
1971-81	15,869	1,586.9	22
1981-82	1,582	1,582	7
1982-83	3,383	3,383	13

Source : Calculated from :

1. *Basic Statistics Relating to the Indian Economy, Vol. 3*, August 1982, Table 19.1, Columns I and II.

2. *Report on Currency and Finance Volume 2*, 1982-83.

(assets of the Issue Department) consists of a minimum of Rs. 2,000 crores worth of gold and foreign securities, the proportion of gold being not less than Rs. 115 crores.

"The total Reserve Bank notes in circulation amounted to Rs. 1,940 crores in 1960-61 and Rs. 15,590 crores in June 1982." It has risen further in June 1984.

In a theoretical appreciation, it would appear that Reserve Bank is graduating, and very fast, from 'money supply' to 'money stock'. Traditional 'money supply' (M1) consists of currency notes and coins and demand deposits, whereas money stock (M2) includes in addition a burgeoning volume of time deposits.

In recent years, Reserve Bank has been clearly underplaying M1 and overplaying M2. The effect of fast growing time deposits on the banking and currency system is easy to appreciate.

In April 1984, the average of buying and selling rate of spot pound sterling were Rs. 15.47 for buying and Rs. 15.35 for selling per £ sterling, and the middle rate was Rs. 15.41 per £. The respective rates on specific dates during April 1984 were as given in Table 7.

TABLE 7

Selling and buying rates of pound (£) during April 1984

Date	Selling rate (in £ = 100)	Buying rate £ = Rs.100
2 April 1984	6.4250	6.4725
11 April 1984	6.4250	6.4735
19 April 1984	6.4665	6.5155
23 April 1984	6.4875	6.5365
30 April 1984	6.5090	6.5580
Total 5 days	32.3130	32.5560
Average	6.4626	6.5112

Rate per £ in terms of rupees:

	Rs.	Rs.
Selling rate per £	100	15.47
	6.0646	
Buying rate per £	100	15.35
	6.5112	
Middle rate per £	100 × 2	15.41
	6.4626 + 6.5111	

In spite of India's membership of the International Monetary Fund and the prevailing system of multi-lateral payments, exchange control has been practised by us as an instrument of international exchange regulations.

This again is, more than that, also an instrument of monitoring a healthy growth of both absolute and hard-core contents of our exports *mix vis-a-vis* our imports, so that there should be a sound rise in ex-

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TOWARDS SOCIAL REVOLUTION

a Case for Economic Democracy -

VASANT SATHE

A Serialisation

9

The economic system

The growth of the private sector

AS FOR THE PRIVATE SECTOR and its performance, the Monopolies Inquiry Commission had estimated that the aggregate assets of the private corporate sector (excluding banking companies) amounted to Rs. 5,500 crores in 1964, of which 46 per cent was accounted for by 75 large industrial houses. The corresponding figures for 1967-68 were Rs. 7,500 crores and 53.5 per cent. In the eight-year period between 1959 and 1966, fresh investment by 20 large industrial houses accounted for 40 per cent of the total additional investment in the private organised industrial sector. Their assets had increased

from Rs. 650 crores in 1958 to Rs. 1,780 crores in 1963-64, Rs. 2,310 crores as on December, 31, 1966 to Rs. 2,757 crores as on March, 31, 1968 and Rs. 6,618 crores in 1979. Thus, between 1958 and 1979 alone, the assets of 20 large houses have expanded ten-fold. Two business house, namely, Tatas and Birlas alone, accounted for the assets amounting to Rs. 2,619 crores, which is nearly 25 per cent of the total assets.

Table 3.7 shows the assets, turnover, paid-up capital and profits before tax of the 20 largest industrial houses in 1979.

TABLE 3.7
Financial position of the 20 largest industrial houses in India (Rs. crores)

Name	Assets	Profits before tax	Paid-up capital	Turnover
Birla	1,309 99	121 02	156 19	1,627.39
Tata	1,309 38	91.63	182 42	1,720.25
Mafatlal	371 06	39 86	61 99	516 08
J.K. Singhania	352 53	13 12	49.87	391.33
Thapar	291 01	24 41	44 30	442.46
Sarabhai	249 52	17 53	20 10	334.27
Bangur	244.20	14 17	35.47	372 97
ICI	235 55	29 82	57 36	352 45
ACC	211 96	14 72	38 43	199 30
Oil India	211 27	13 96	33 93	435.08
Sriram	208 65	16.16	28 60	385.23
Scindia	205 96	—9 85	19.27	88 05
Kirloskar	191 91	12.35	29 44	229.46
Hindustan Lever	187.80	32 75	33 52	423 41
Larsen and Toubro	185 48	22.47	26.31	190 94
Modi	177 08	14.66	21.88	345.26
Chowgule	172 59	—2 66	22.56	43.26
Bajaj	168 61	14.35	23.08	211.86
Bhilwadiwala	168 17	—0 84	15 97	64.61
Kasturbhai Lalbhai	165.98	22.94	20 93	230.53

The phenomenal growth of large industrial houses may, inter-alia, be attributed to two important factors: (i) the industrial licensing system and other controls and (ii) the provision of assistance by financial institutions. According to the Monopolies Inquiry Commission Report :

The licensing system worked out in such a way as to provide a disproportionate share in the newly licenced capacity to a few concerns belonging to the large industrial sector. The maximum of benefit went to a few larger houses. These houses understood the mechanism and weaknesses of the licensing system as well as the manner in which maximum benefit could be obtained out of it. There are some which had developed the practice of submitting a large number of applications for the same product through various firms controlled by the same house.

It will not be out of place in this context to mention her the remarks of a non-resident Indian businessman, Mr. Swraj Paul, made at the Press Club of India on 19 August 1983. He said : "It is unfortunate that just 11 business houses in the country were controlling the industry in which public institutions had invested about Rs. 27,000 crores whereas their own investment was barely Rs. 148 crores." He further disclosed that "11 industrial houses were siphoning off a big chunk of the financial gains for their own ends and according to some estimates, they had deposited Rs. 25,000 crores in banks overseas". The remarks made by Mr Swraj Paul have not been denied or contradicted by the big industrial houses or by any responsible quarters.

The success of the operation of the private sector was because its activities were largely restricted to consumer goods and it was afforded adequate protection from foreign competition. The private sector is, therefore, operating in an area of high profits and is earning relatively higher profits than the public sector.

It is pertinent to note that the principal motive behind the operation of private sector is profit. In a situation in which only 12.5 per cent of the total population comprises the market for goods, the private sector produces only such goods and services which the heavily weighted in favour of that class which has a substantial purchasing power. Table 3.8 gives the factor incomes of the broad components of production, in both public and private sectors, over the years.

The figures given in this table reveal that there is a wide gap between the public and the private sector in the matter of factor incomes under the head "profits and dividends" over the years. While the percentage factor of profits and dividends in the private sector has remained almost steady at a very high level of over 22 per cent over nearly a decade, in the public sector it has been fluctuating between 12.4 and 21.8 per cent and during 1980-81, the latest year of review, amounted to 13.9 per cent. With regard to the percentage factor of compensation to employees, whereas in the private sector it has remained steady between 59.6 and 62.5 per cent in the public sector it has been stabilising over 60 per cent. This clearly establishes the fact that the organised private sector is operating at a high profit level.

Purchasing power for food

Having considered the state of the economic system, it is essential to take a look at the poverty profile of the economy.

We have dealt with the per capita consumption expenditure of our people earlier and have seen that a very large segment, consisting of 598.70 million people, has a per capita consumption expenditure of Rs. 1200 or less per annum. Among them, about 135.76 million people are able to spend less than Rs. 408 per annum per head on themselves. When this is the situation, it is interesting to know how far they are able to meet at least the requirements of

TABLE 3.8
Factor income by public and private organised sectors (at current prices) (Rs. crores)

Item	1970-71	1975-76	1976-77	1977-78	1978-79	1980-81
Public enterprises	2606	6654	8206	8939	9942	13,096
1. Compensation of employees	1646	4340	4705	5215	5864	8034
(percentage)	(63.2)	(65.2)	(57.3)	(58.3)	(59.0)	(61.3)
2. Interest	590	1133	1553	1849	2181	2986
3. Rent	46	104	161	177	209	261
4. Profits and dividends	324	1077	1787	1698	1688	1815
(percentage)	(12.4)	(16.2)	(21.8)	(19.0)	(17.0)	(13.9)
Private enterprises	4476	7710	8822	9783	11,008	13,710
1. Compensation of employees	2793	4721	5260	6009	6740	8463
(percentage)	(62.4)	(61.2)	(59.6)	(61.4)	(61.2)	(61.7)
2. Interest	418	1052	1196	1342	1509	1755
3. Rent	95	157	164	202	256	279
4. Profits and dividends	1170	1780	2202	2230	2503	3213
(percentage)	(26.2)	(23.1)	(25.01)	(22.8)	(22.7)	(23.4)

Source: National Accounts Statistics 1970-71 to 1980-81, February 1983, pp. 32-33, Central Statistical Organisation.

line can be estimated as follows :

Daily per capita caloric intake at the poverty line for rural areas is 2400 and for urban areas is 2100.

TABLE 3.9
Minimum (per capita per day) recommended calorie intake norms

Group	Particulars	Calories	Remarks
Man	Sedentary work	2400	(as recommended by the Nutrition Expert Group in 1968 and still treated as the latest)
	Moderate work	2800	
	Heavy work	3900	
Woman	Sedentary work	1900	
	Moderate work	2200	
	Heavy work	3000	
	Pregnancy (second half of pregnancy)	+300	
	Lactation (up to one year)	+700	
Infant	0—6 months	100/kg of body weight	
	7—12 months	120/ kg of body weight	
Child	1—3 years	1200	
	4—6 years	1500	
	7—9 years	1800	
	10—12 years	2100	
Adolescent	13—15 years (boys)	2500	
	(girls)	2200	
	16—18 years (boys)	3000	
	(girls)	2200	

Source : Nutritive Value of Indian Foods National Institute of Nutrition, ICMR, Hyderabad , 1981.

has recommended the minimum per day per capita calorie intake for different categories as listed in Table 3.9.

However, the Task Force on Projection of Minimum Needs and effective Consumption Demand set up by the Planning Commission in 1977 computed the weighted averages of daily calorie intake of 2400 per persons in rural areas and 2100 per person in urban areas, corresponding to the poverty line, after taking into account all the relevant factors, such as, sex, age and type of work, as considered by the ICMR.

Cost of calorie requirement

It has been estimated by the Planning Commission that the monthly per capita consumption expenditure corresponding to the poverty line in terms of 1980-81 prices had escalated to Rs. 90.00 and Rs. 98.00, respectively, for rural and urban areas, on account of the increase in prices over the years. Assuming that the increase in the private consumption expenditure between food and non-food items in 1980-81, by and large conforms to that in 1976-77, as originally estimated by the Task Force, the per capita monthly consumption expenditure on food items in 1980-81 at the poverty line is estimated to be of the order of Rs. 70.47 for rural areas and Rs. 73.40 for urban areas. In other words, the per capita daily cost of 2300 calories in rural areas was Rs. 2.35, or Rs. 70.47 per month, and that of 2100 calories in urban areas was Rs. 2.45 per day or Rs. 73.40 per month.

Requirement of foodgrains

In terms of the calorie intake recommended, the total annual requirement of foodgrains at the poverty

Thus, the yearly per capita caloric intake at the poverty line for rural areas would be 876,000 and for urban areas it would be 766,500.

It has been estimated by the Planning Commission that 77 per cent of the private consumption expenditure on food items is attributed to foodgrains (i.e. cereals and pulses in rural areas) and 61 per cent in urban areas. The estimated per capita yearly requirement of foodgrains at the poverty line in terms of calories intake, would be :

- (i) Rural—674,520 (at 77 per cent expenditure)
(ii) Urban—467,563 (at 61 per cent expenditure)
The population of India, according to 1981 census:
(i) Rural—524.421 million
(ii) Urban—159.551 million
Total—683.972 million

The estimated total requirements of foodgrains in 1980-81 at the poverty line in terms of calorie intake :

- (i) Rural—353,732 ('000) million calories
(ii) Urban—74,600 ('000) million calories
Total—428,332 ('000) million calories.

Let us now look into the production of foodgrains and calorie equivalent of the same.

Production of foodgrains

After arriving at the calories requirements in terms of foodgrains for the entire population, we may now take a look at the actual production figures of foodgrains during the year 1980-81 and its calorie equivalent, which are given in Table 3.10.

Table 3 10
Production of foodgrains (1980-81)

Name of crop	Number of calories per tonne (in '000)	Production (in '000 tonnes)	Calories equivalent (in '000 million calories)
(a) Cereals			
Rice	3,400	53,231	180,985.40
Wheat	3,460	36,460	126,151.60
Barley	3,000	2,242	6,726.00
Jowar	3,490	10,504	36,658.96
Bajra	3,032	5,418	16,427.30
Maize	3,420	6,804	23,269.68
Millets	261	1,578	411.86
Ragi	3,280	2,465	8,085.20
	Total (a)	118,702	398,716.08
(b) Pulses			
Tur (arhar)	3,350	2,015	6,750.25
Gram	3,720	4,652	16,747.20
Moth	3,400	198	673.20
Moong	3,480	974	3,389.52
Masur	3,430	435	1,492.05
Urad	3,470	977	3,390.19
Khesri	3,450	468	1,614.60
Peas and beans	3,760	84	315.84
Kulthi	3,400	739	2,512.60
Other pulses	3,400	657	2,233.80
	Total (b)	11,199	39,119.25
Grand Total (a+b)		129,901	437,835.33

Table 3.10 shows that the production of foodgrains in the country during 1980-81 was 437,835 ('000) million calories vis-a-vis the estimated requirement of 428,332 ('000) million calories, indicating that the overall production during 1980-81 was marginally higher than the corresponding requirement of calorie intake by 2.22 per cent. However, it must be borne in mind that persons below the poverty line can ill afford to spend on pulses and the majority of the people subsist only on cereals and coarse grains.

The foregoing picture of a marginally higher per capita availability of foodgrains is a mirage and is highly misleading in the absence of a rational distribution system of foodgrains. The availability of calories of foodgrains according to consumption expenditure figures will be far less than the average per capita availability according to the production or even according to the ICMR standards.

With the increase in the production of foodgrains, the capacity to make available the required amount of calories has been achieved at the national level. But when it comes to groups of people and individuals requiring the prescribed calorie intake, the issue is linked to the capacity to purchase foodgrains. Due to the very meagre purchasing power of a vast majority of people below the poverty line a situation of scarcity in the midst of plenty is created. The situation is further aggravated if we take into ac-

count other items of consumption. This raises an important issue as to whether poverty defined on the basis of the caloric requirement and the availability of foodgrains makes any sense. We have to take into account the total 'consumption basket' which indicates a minimum level of living. We should also take into account some other items in the consumption basket and then calculate the cost of the consumption basket.

A daily budget for food

After taking into account various factors, the ISMR has estimated the per capita requirement of food per day at the national level computed from the recommended intake of energy and protein at 2150 calories per day. Table 3.11 gives the per capita requirement of food (gm/day) at the national level computed from the recommended balanced diets.

Based on the requirement of food per day, as shown in Table 3.11 let us try to make a daily budget in terms of the money required to buy this food. In the absence of any all-India retail price index for these items, we have to confine our study to a particular area. Let us take urban Delhi for this case study. Here also, we will rely on the retail prices of fair price shops, which issue foodgrains and sugar at a heavy government subsidy, varying from 50 per cent to 75 per cent when compared with the

market prices for these commodities, and for other items we take the average retail prices of the Super Bazar in recent period. Table 3.12 gives the per day cost for the foregoing items of food.

Table 3.11. Requirement of food (gm/day)
Requirement of food (gm/day)

Foodstuff	Physiological level	Retail level	Product level
1. Cereal	386	436	490
2. Pulses	43	47	53
3. Leafy vegetables	58	64	72
4. Other vegetables	45	49	55
5. Roots and tubers	40	44	50
6. Milk	200	220	248
7. Fats and oil	31	34	38
8. Sugar/Jaggery	31	34	38

TABLE 3.12
Cost of food (per day at December 1982 prices)

Foodstuff	Quantity at retail level (gm)	Rate per kg. (Rs.)	Amount required to by (Rs)
1. Rice 218 }	436*	2.21 0 61	1.10
2. Wheat 218 }		1.65 0.49	1.35
3. Pulses }		5 00**	
4. Leafy Vegetables	64	3.00**	0.19
5. Other vegetables	49	3.00**	0.15
6. Roots and tubers	44	2.00**	0.09
7. Milk	220	1.804+	0.42
8. Fats and oils	34	15.00**	0.51
9. Sugar/jaggery	34	3 15	0.11

Accordingly, the monthly budget will be $2.82 \times 30 = \text{Rs. } 84.60$
The yearly budget will be $2.82 \times 365 = \text{Rs. } 1025.65$

In making the foregoing rough calculations, abundant care has been taken to choose the lowest prevailing retail price in the market and that too from sources of retail outlets for subsidised commodities of mass consumption. The urban areas of Delhi are well served by fair price shops compared with most of the countryside. Facilities for the rationalised mass distribution of cheap milk, as done by the DMS in Delhi, are nonexistent in most of the urban and rural areas in India.

Even relying on the aforementioned prices, we find that the daily budget needed for foodgrains and pulses, leave alone vegetables, oils and sugar, comes to Rs. 1.35, which means Rs. 40.50 per month or Rs. 492.75 in a year of 365 days. Now, let us see how many people can afford this expenditure based

*Assuming wheat and rice are consumed in the ratio of 1:1

**Average of different varieties of this item has been taken.

+ Price of milk sold by the Delhi Milk Scheme (DMS); the fat content in this milk is far below that of standard milk, which sells at about Rs. 4 per litre.

on
NSS.

According to the results of the NSS showing the percentage distribution of households, rural and urban, for the year 1973-74, by monthly per capita expenditure classification (see Appendices 1 and 2), 41.59 per cent of the people in the rural areas have a monthly per capita expenditure of less than Rs. 43. In the urban areas, the percentage in this category is 21.35. Broadly applying these percentages to the 1981 Census figures, we may assume that 218 million in the rural areas and another 34 million in the urban areas spend less than Rs. 43 per month per capita on themselves.

We may reasonably conclude, even allowing margins for omissions and commissions in arriving at these statistics, that 252 million people are not even able to buy the daily requirement of food for which Rs. 1.35 per day or Rs. 40.50 per month would be needed. In view of this, the claims of food self-sufficiency are hardly valid.

The overall production of foodgrains may be theoretically sufficient. But in the absence of any rational distribution system and with a widely varying purchasing power pattern that deprives millions of the capacity to buy even minimum requirements of foodgrains, it does not meet the requirements of per capita availability in terms of the norms recommended by the ICMR. Basing the requirement at the production level at the rate of 490 gm per capita per day of cereals and 53 gm per capita per day of pulses, the requirement of our population (according to the 1981 Census) would be 122.33 million tonnes of cereals and 13.23 million tonnes of pulses, making an aggregate quantity of 135.56 million tonnes of foodgrains. To maintain the availability at the same level, a minimum of 5 million tonnes has to be added every year to meet the requirements of the yearly growth of the population.

Moreover, it may be of interest to look into the needs of 'fats and oils'. According to the ICMR recommendations the daily per capita requirements is 34 gm. On this basis, the per capita requirement of 'fats and oils' in a year of 365 days would work out to 13.85 kg. According to the CSO (Central Statistical Organisation) the net per capita availability of edible oils for the year 1979-80 was 3.7 kg and that of Vanaspati 1.0 kg making an aggregate of only 4.7 kg per capita. It can be easily estimated as to how far we are lagging behind in meeting the country's requirements of this essential component of the common man's diet.

When we say that we are self-sufficient in foodgrains, we are talking of only a mathematical balance in terms of market-oriented demand and not in terms of real requirements of minimum nutritional needs.

The maldistribution of purchasing power results in malnutrition, which, in turn, brings about deficiency, both physical and mental of a lifelong nature in a large number of people. This affects their working capacity as well as productive skills. The cumulative effect of all this is to in-

crease the burden on the nation of this huge population, which serves as a drag, very much like a burden on a man's back. This also becomes a moral responsibility for the rest of the society and the weaker part always hinders the speed of the stronger part. This hindrance generates in its wake sociological and psychological problems of a depressing character. Once again, the easiest way out our society finds is to take refuge in fatalism and to succumb to this moral delusion in the name of religious beliefs.

How far can the 20-Point Programme help in alleviating the suffering of the people, especially those living below the poverty line?

20 particles of development and the national sector

The investment pattern during the last three decades in the Indian economy has been geared to maximise the national and the per capita income. The investment matrix of the production structure was envisaged to provide employment to the labour and ensure an equitable distribution of income. The distortions, if any, were proposed to be corrected by suitable modifications in fiscal and monetary policies.

This design of development which was put into operation by Pandit Jawaharlal Nehru provided a sound economic base, promoted industrial growth and, in particular, created a select band of skilled managerial manpower. The public sector which provided the infrastructural base gave an impetus to the production in the private sector which concentrated on the goods and services demanded by the segment of population with sufficient purchasing power. The equitable income distribution could not be ensured by the given production structure and an investment matrix which was oriented to meet the demands of the relatively well-off people than to the 'needs' of the masses.

The developing economies of the 1950's and 1960's all over the world, including India, were hypnotised by the concept of the growth of the GNP (Gross National Product). Developing countries were told by matured and seasoned developed countries that: "Take care of the GNP and poverty will take care of itself." Given the social, political and economic ethos of the developing countries, this was an erroneous dictum. Dr. Mahbub-I-Hay, then Chairman, Planning Commission, Government of Pakistan, has rightly remarked in his article entitled, "Let Us Stand Economic Theory on Its Head", published in the journal *Insight* (January 1970): "Another direction we went wrong was in assuming that income distribution policies could be divorced from growth policies and could be added later in the fiscal system of the developing countries and fairly naive understanding of the interplay of economic and political institutions."

He further adds that "once the production has been so organised, it was to leave a fairly large number of people unemployed. It becomes almost impossible to redistribute income to those who do not even participate in the production stream....."

Once you have increased your GNP by producing more luxury houses and cars, it is not very easy to convert them into low cost housing or bus transport."

Mrs. Gandhi's 20-Point Programme, which can be best described as 20 particles of development, is an attempt to correct the production structure to cater to the 'needs' of the people rather than merely meet the 'demands' of the people. The investment matrix is now geared to distributional parameters so that the existing production structure contributes to the GNP and helps in changing the composition of production structure over a period of time. Mrs. Gandhi's target-oriented 20-Point Programme has been grafted to the existing planning design. It draws its strength from a well-laid out infrastructure and a basic industrial structure coupled with the modern agricultural sector. The attempt is to integrate the production matrix with the distribution matrix. But these two blocks of the economy are still operating as a part of the same planning design. The time-bound 20-Point Programme aims at ameliorating the conditions of the poor and the underprivileged. It is essential that this process becomes a self-sustained one. The present planning design does not provide for such a mechanism. This is on account of the fact that the present production structure distributes its gains either to the public sector or to the private sector. In case of the public sector, the gains are few due to the overall socio-economic objective of strengthening production potentialities of the economy, while, in the private sector, the gains are not available in an equal measure to all the participating factors of production. This results in the monopolising of the gains by a few in the private sector.

In view of this, resources separately required for the 20-Point Programme have to compete with the resources entering the production structure. This calls for changes in organisation and designing of the production structure and the investment matrix in such a way that there should be no need to have a separate programme of distribution of income. It should be in-built into the organisation of the production structure.

The concept of economic democracy enunciated subsequently is an attempt to introduce gradually changes in the production structure to ensure proper sharing of the gains of participating factors of production.

The 20-Point Programme will be an integral part of the national sector and this would insulate the economy from maldistribution of income and from extra-economic forces which bring about distortions in the economy. Mrs. Gandhi's Programme is, in fact, a realisation at the political level of the need to intervene in the design of economic development. This will get formalised as soon as we start implementing the main ingredients of the national democratic sector. What this really means is to integrate distribution parameters at the production stage. Once each one gets employment in the production mechanism as an equal partner and income becomes a function

(Contd. on page 34)

India enters metro age

Mahadev Pakrasi

India entered a new age of transportation in October this year when a four kilometre stretch between Esplanade and Bhawanipur of Calcutta Metro was opened to traffic. In spite of delays and cost escalation, Metro has dispelled doubts and misgivings about the reality of the Indian underground railway, says the author.

THE FIRST AND LASTING imprint that leaves a visitor about Calcutta, the tenth busiest city of the world, is its chaotic traffic. In its age-worn streets, the views of slow moving tram cars, overflowing with passengers perched all over, precariously hanging passengers on footboards of buses and still others struggling to manage a foothold are some of the eyesores of a metropolitan city.

The three-hundred-year old chance erected city of Calcutta founded by a petty British businessman Job Charnock grew in fits and starts until the country underwent the traumatic experience of partition. Masses of humanity crossed the border and unplanned settlements mushroomed in and around this city. This created tremendous pressure on the city's transport system. Imagine a situation of 10 lakh commuters converging on the city's skimpy roads daily leading to business centres and office areas. Compared to 25 per cent of the city space occupied by roads in Delhi only 6 per cent is available for roads in Calcutta. The result : chronic traffic congestion. This has put the traffic system into the severest test and naturally it is now almost on the verge of collapse. A way out has to be found to stem the rot. And conceived it was way back in 1949.

The great visionary Dr. B. C. Roy, the first Chief Minister of the State, had thought about an underground railway transport system to ease the stress on surface transport and made a preliminary exercise. The

cost factor and other pressing socio-economic considerations like the Refugee rehabilitation issue apparently required more urgent attention and the transport issue was shelved.

Project profile

It was reopened in 1972. A blue print was prepared to construct a 16.43 kilometre long rapid transport system mainly located underground. It will pass under the busiest traffic Corridor from Dum Dum to Tollygunj. Its 17 stations enroute will have two terminus stations on surface.

The project cost of the Metropolitan Rapid Transport system or Metro in short, sanctioned in 1972 was Rs. 140 crores. It was revised to Rs. 250 crores in 1974. It is now estimated that when the Metro will be ready in another six years, the cost would escalate to about Rs. 1000 crores.

So far, about fifty per cent work has been completed. At the moment commercial movement of trains has been restricted to a 4 kilometre stretch between Esplanade and Bhawanipur. It will have five underground stations. One train with four coaches will shuttle in the area covering the distance in six to eight minutes.

At present about 80 odd cities of the world are having the Metro.

Its novelties

The Metro-rail has many novelties. The train will be having eight coaches. Six coaches will have motored axles and two will be trailer coaches. It will have no overhead link to power it. It will have a connecting system under the coaches which will draw power from a third rail running parallel to the track. This system is adopted in most of the Metros of the world.

Unlike the ballast, stone chips on which the sleepers and tracks are laid, the rail line will be placed on a bed of concrete and thick rubber mat. This will ensure a dust free and less noisy journey. Moreover, this arrangement does away with maintenance work on the rails after usual running of trains needing checking of alignment of the track. The doors will close automatically before the train moves. The engine cable will

have sophisticated equipment to keep the driver ever alert against overspeeding.

The movement of trains will also be constantly monitored from the central Control room to ensure smooth movement of traffic. Most of the electric cables laid are fire-proof and adequate provision made for fire alert and fire fighting equipment. The coaches themselves are spartan looking with modest running seats along the sides. Maximum provision has been made for standing passengers. This is quite in keeping with the rushing crowd and short period of transit of a little over half an hour to cover the sixteen and a half kilometres route.

The crucial question is of continuous supply of power. The Metro will require about 55 Megawatt power to run all its installations smoothly. It has approached the Calcutta Electric Supply Undertaking, a private sector Organisation. The General Manager of the Metro-rail, Mr. N. K. Dasgupta feels, for a state which consumes about 600 Megawatt power daily, the question of diverting one-tenth of its requirement will not be much of a problem. Three substations are being built for proper distribution of power to all installations. In the extreme case of a total power break down. The Metro will have its own generating sets to keep its stations lighted and vital equipment on. The Metro will also have a unique distinction of keeping the underground area cooler than the surface atmosphere. The Stations and tunnels will be air-cooled with big air handling fans of 250 cubic metre per second capacity. It will ensure cleaner and cooler environment than the outside atmosphere.

Cut & cover method

Unlike the usual mechanised tunneling method, the metro has used the "cut and cover" method which is cheaper and employment generating. Here also there are some novelties. In Chitpur yard, for example, diaphragm walls were constructed underground across 19 railway lines. The utility lines were restored on girders and walls erected specially for them. Beyond Chitpur yard to Shyambazar work is in progress over a kilometre stretch on two driven shield tunnels by using special equipment purchased from Hungary and the Soviet Union. The tunnel has crossed a deep canal, a very busy traffic intersection and several old multi-storeyed buildings. It is almost ready.

Special medical provisions had to be made for the personnel working in the zone of compressed air created for the purpose of tunneling. It is quite an experience to tread in mud and slush under the surface in heat and sweat to see the toiling men engrossed in their work amid dizzy clamour of monstrous machines. The floating traffic on surface is also blissfully, unaware of what goes on underground.

The underground shell or tube which bears the load of surface has to be spacious enough for passing of a pair of trains and strong enough to withstand the great weight of the buildings, soil and vehicles over it. Great care has been taken to cause least damage to the adjacent buildings while construction of the metro. Huge concrete diaphragm walls are erected to take care of the pressures from the side. In one of the most heavy traffic area, Chittaranjan Avenue, lack

of alternative roads to divert traffic during posed a great problem.

A novel method "Cover and Cut" was devised. Under it diaphragm walls are made on two sides. Two rows of steel posts are driven in the centre. Deck girders are kept resting in diaphragm walls and deck plates are laid on the top to enable the flow of traffic. Thus while traffic moves on uninterrupted on the deck, construction and digging goes on underneath. This method considerably reduces inconvenience to public from the 'cut and cover' method. This technique is being followed over longer stretches.

The concrete boxes of the Metro are usually two storeyed at stations. The upper box is called Mezzanine and is used for passengers and traffic vending. The lower box is equipped with platforms and tracks. For entry and exist small structures are located at the surface. These are connected by stairs and passages to mezzanine floors. At Tollygunj the track comes overground. The station building on surface is almost ready.

The metro in the final shape in 1990 has many promises to keep. The eight-coach train will transport 60,000 passengers an hour and 17 lakh a day. There will be an up and down trains every two minutes. The metro authority hopes that it will siphon off about 20 per cent of the harried commuter traffic from the surface transport. Undoubtedly this will reduce congestion and pollution of the city to quite an extent.

Some nagging questions

There still remains some nagging questions. Firstly, how safe is the Metro system in the eventuality of the flooding of the tunnel. The experience of last June when it was almost ready for partial commissioning is far from happy, in terms of material loss also. The British and French experts teams which visited the site after the deluge have, however, given a clean chit on the quality of construction. The Metro General Manager, Mr. Das Gupta, however, expressed confidence that they are more vigilant now and such a situation will not recur.

The other question is about maintenance. Lack of maintenance, vandalism and thefts of vital equipment have been the typical bane. In Metro thefts and sabotage will spell doom to thousands of unwary passengers as there is little room for manoeuvre. According to Metro authority it has been decided that during the construction phase it will operate and maintain the system under the overall control of the Railway Ministry.

All these problems will come out in their true colours in the partial operation of the Metro. It will give adequate opportunity to the authority to rectify the initial faults in operation, ventilation, maintenance systems and effectiveness of the sophisticated equipments installed.

In spite of delays and cost escalations, Metro has dispelled doubts and misgivings about the reality of the Indian underground railway. As the country enters into a new age of transportation, the dream of the architect of West Bengal Dr. B. C. Roy has come true after 35 years. □

Television goes to villages

Gopal S aksena

Doordarshan has to play two major roles in our country. Primarily it is required to educate and inform as an agent of social change. Secondly, it has to fulfil public expectation of being an entertainer.

Doordarshan celebrated its silver-jubilee recently. The mandate handed over to it twenty-five years ago has not changed at all. Unlike the television organisations in countries in the West, Doordarshan was required to act as 'an agent of social change'. In other words, it meant that Indian television was more for 'education' and 'information' than for 'entertainment'.

The same concept was applied to our Rural Programmes, when in January 1966, an agricultural television service, called 'Krishi Darshan', was introduced. Now, Rural Programmes are telecast from all the metropolitan centres, Post-Office stations (called Upgrah Doordarshan Kendras) and the present INSAT Service. In a way, all Low-Power Transmitters (LPTs) also put-out agricultural programmes because they relay Delhi Doordarshan's entire transmission (including 'Krishi Darshan').

The basic objectives of Rural Programmes on television can be summed up as follows :

- (a) To familiarise rural viewers with latest technical and scientific know-how about farming, agricultural implements, fertilisers, good quality seeds, cottage industries, rural development, weather forecasts etc.;
- (b) To provide healthy entertainment (Folk music/plays/puppet shows etc.) and,
- (c) To acquaint the audience with the importance of education, personal hygiene and health, family-welfare etc.

In 1975, India embarked upon a new project the Satellite Instructional Television Experiment (SITE). It was a one-year project and came to be recognised as one of the most exciting experiments

in the field of mass communication. Covering in a single, simultaneous sweep, 2400 villages in six States, with four linguistic groups, was in itself an achievement.

India exploited the Satellite technology by introducing INSAT (Indian National Satellite) for the expansion of television in the country. After INSAT-1A had to be abandoned for having developed some technical snag in 1982, INSAT-1B was made fully operational by October, 1983. (Besides television, it is being utilised for radio, television, tele-communication, meteorological forecasts etc.).

In case of television, INSAT-1B is used to carry television to rural and tribal areas in the remoter parts of India. Under this project, three districts each in six states (Andhra Pradesh, Orissa, Maharashtra, Uttar Pradesh, Bihar and Gujarat) have been selected to provide at the government cost, community-viewing facilities. In all, 4000 community-viewing sets are being provided in selected villages. Half of these are DRS (Direct-Receiving Sets) and half VHF (Very High Frequency) sets.

The INSAT programmes are essentially 'instructional'. These can broadly be divided into two categories (1) Area-specific items, like rural programmes etc., and (2) educational for the age-groups of 5 to 8 and 9 to 11 among the primary school-going children. The area-specific programmes have a thrust on agriculture, animal-husbandry, health and hygiene, family-welfare, adult education, social awareness, national integration, weather-forecasts, topical hints for farmers etc.

Programme input

The bulk of programmes are required to be prepared in field-areas. Only a bare minimum is to be left over to sophisticated studio-productions. The planning of programmes is being done by the Doordarshan producers in consultation with various departments of the Central and State Governments involved in agricultural and rural-development activities (including Agricultural Universities and Research Institutes). Then, there exists coordination and collaboration between the Producer and the Audience Researchers.

Transmission methods

Arrangements made for taking INSAT programmes to the viewer show an improvement on those tried during SITE. In case of SITE, the transmission could be viewed only on the specially-made Direct Receiving Sets (DRS). But INSAT offers a combination of DRS and VHP (Very High Frequency) sets. The former receive programmes directly from the Satellite and the latter catch the signals through terrestrial transmitters. In fact, the terrestrial transmitters receive programmes on a DRS and then transmit the same to the VHF sets. Known as the 'Rebroadcasting System', it facilitates the reception of 'rediffused signals' by an ordinary VHP set. Naturally, the INSAT system ensures greater utilisation especially in rural and remotest areas.

According to a Survey, conducted on the "Need Assessment of Agriculture in Muzaffarpur", by Uppagrah Doordarshan Kendra (Satellite Television Centre), New Delhi :

"Most of the respondents appreciated the agriculture-based programme, 'Chaupal', which gave them information about modern cultivation, HYV, fertilizers, pesticides, diseases of crops and cattle etc. The respondents, however, said that though TV is a powerful media it has made only a limited impact on them because the programmes telecast were not interesting and need-based..... and (irrelevant) to the area".

What comes in way ?

But why have our Rural television programmes not been able to reflect a genuine 'ruralness'? Why does one get an impression of these being contrived, deliberate or superficial. No village-atmosphere, no rural warmth, no folk flavour. There are many factors contributing to this unhappy situation.

Firstly, the urban viewers of Doordarshan have always been very dominating and dictating in regard to their own choice about the contents of our single channel television transmission. Their tastes, flairs and preferences get the better of needs and interests of our silent, though sizeable, rural audiences. For instance, the Post-Size Centres were initially not to telecast feature films. But constant protests from the city-dwellers in those areas worked and the Sunday Feature Films became part of their regular transmissions.

More recently, their demand for the Thursday feature films and song and dance sequences from films were also conceded. Even the Kheda-transmission—an experimental project—is now carrying feature films.

Secondly, the introduction of national network programmes and relay of Delhi Doordarshan's transmission from all LPTs seem to have brought about a radical change in the basic concept of 'urban-rural divide' among the television-views. All programmes are now for all. Either one views them or switches

set ! And, naturally being more entertaining, Delhi programmes are liked by rural viewers.

Thirdly, the proportion between the number of sets available in villages and in cities is hopelessly poor. In other words, there are more number of sets in the urban and semi-urban areas than in rural parts. Perhaps, the more numerous has better claims in democracy !

Fourthly, the Community-viewing scheme needs to be reviewed and revised, if necessary. There are at present about nine thousand community-sets against 5.75 lakh villages in India. While not many private-owned sets are available in villages the number of Community-Viewing ones is far too inadequate. Then there are problems like (a) lack of regular power-supply in villages; (b) irregularity on the part of set-custodians to switch the sets on in time; (c) shortage of man-power and machinery to repair the sets; (d) necessary facilities by way of adequate space proper viewing-conditions, reasonable number of persons per set, etc. These are a pre-requisite for an effective viewing of rural telecasts.

Fifthly, almost all Production Centres of Doordarshan are located within the urban-limits. Most of the TV-Producers come from the city-cultural ethos. A majority of talkers and participants are drawn from urban areas. Naturally, the culture and sensibilities of villages and hopes and aspirations of rural-folk are not much reflected in our television programmes. Not even in those, exclusively meant for the rural-folk !

Sixthly, television is still a costly proposition from a common man's point of view. The huge cost involved in providing the basic infra-structure at the receiving end is a major deterrent. That is the reason why, despite all visual attractions that television holds, radio is still effective, relevant and popular in rural areas today. A farmer can move-about-around his field, hut or market-place-with a transistor dangling down his shoulder.

And, lastly, the concept of entertainment is undergoing a vast and fast change in rural areas. They love to watch feature films and other high entertainment programmes as much as the city-dwellers do. Their constant exposure to All-India programmes (through relays) and to films (on their frequent visits to nearby towns) has considerably modified their tastes and flairs.

The Joshi Working Group on Software for Doordarshan have observed :

"The trouble with many development programmes like Krishi Darshan.....is that they are produced within the studio often with urban men in rural garb. It is often an urban view of rural programmes, or a view of problems of urbanised villages. Considering the immensity of the task of fighting poverty, we recommend that more than half the time of Doordarshan must be related to the development and educational programmes." □

The economic situation

In 1983-84, the economy recorded significant growth largely as a result of a sharp increase in agricultural output. Although industrial output too showed higher growth than in the previous year, the growth rate was much below the Plan target. National income is expected to rise by about 8.5 per cent, as compared with the increase of less than 2 per cent in 1982-83. External payments position also improved inspite of a widening of the trade gap. Despite these favourable developments, the price situation continued to be a source of concern.

Agricultural production

Latest estimates place foodgrains production during the year in excess of 150 million tonnes, surpassing the previous peak touched in 1981-82 by about 13 per cent. Production in the previous year was 128.4 million tonnes. As for the commercial crops, oilseeds production is expected to establish a new peak of 12.6 million tonnes. Jute and mesta output is higher at 7.5 million bales, as against 7.2 million bales. Output of cotton is, however, estimated lower at 7.7 million bales, as against 8.3 million bales. Sugarcane production is also expected to be lower around 165-170 million tonnes, as against 189 million tonnes. With increased production and hike in procurement prices, larger quantities of foodgrains have been procured for public distribution. Because of the improvement in open market availabilities, off-take of foodgrains from the public distribution system which had shown a rising trend in 1982-83, has been slowing down since Sep-

tember 1983. Consequently, the public sector stocks of foodgrains as at the end of June 1984 stood higher at 22.6 million tonnes, as against 16.9 million tonnes a year before.

Industrial output

The performance of industrial sector, although not as impressive as that of the agricultural sector, was still better than in the previous year. The general index of industrial production showed a rise of 5.4 per cent during the financial year 1983-84, as against 3.9 per cent.

Production		
	1982-83	1983-84
Foodgrains (Million tonnes)	128.4	150.6
Index of industrial output (1970=100)		
Monthly average	173.8	183.0
Growth rate (%)	+3.9	+5.4

All the groups except the 'consumer goods industries' group recorded increase. During the first two months of the current financial year (1984-85), the index showed a further increase of 7.6 per cent, as against 3.5 per cent in the corresponding period of the previous year. The six infrastructure industries viz. electricity, coal, saleable steel, crude petroleum, petroleum refinery products and cement registered an overall increase of 6.7 per cent during the financial year 1983-84, on top of an increase of 8.8 per cent achieved in the previous year. Total power generation during the year 1983-84 at 139.9 billion kwh, increased by 7.6 per cent, compared with an increase of 5.7 per cent in 1982-83. Power generation during the first quarter of 1984-85 (April-June) at 37.4 billion kwh, was higher by 15.7 per cent, as compared with an increase of only 1.3 per cent in the same period of 1983-84. Although the data show an encouraging performance of infrastructure industries, production in the manufacturing sector does not appear to have been helped

to the commensurate degree, as there still remained a gap between the availability and requirement of power which appears to have affected industrial production, particularly in southern and eastern regions. The output of coal and cement increased but still fell short of the targets; besides, their movement of the consuming centres was affected by inadequate availability of wagons. The disturbed situation in the Punjab and in industrial relations also affected manufacturing production adversely.

National income, saving and investment

According to the Reserve Bank estimates, the growth rate in net national product (NNP) in real terms would be around 8.5 per cent in 1983-84, the highest since 1978-79, against 1.7 per cent in 1982-83 and 4.9 per cent in 1981-82.

National Income, Saving and Investment

	1982-83	1983-84
National Income*	+1.7	+8.5
Domestic Saving†	16.9	16.6
Inflow of foreign resources	1.6	1.4
Aggregate net investment†	18.5	18.0

*Per cent growth in net national product in real terms.
†As per cent of net national product at current market prices.

Aggregate net domestic saving is tentatively estimated at 16.6 per cent of NNP at current market prices, as against 16.9 per cent in 1982-83. The net inflow of resources increased over the year but, as a ratio of NNP, it showed a small decline from 1.6 per cent in 1982-83 to 1.4 per cent in 1983-84. Because of a sharp increase in NNP at current market prices, net investment as a ratio of NNP declined from 18.5 per cent to 18.0 per cent. Gross investment as a proportion of GNP also declined from 24.2 per cent to 23.3 per cent.

Credit policy

The credit policy measures undertaken during the year were chiefly aimed at reducing the expansionary impact of rapid growth in reserve money. While so doing, the basic tenet of credit policy continued to be one of fully supporting all productive activities with the observance of normal credit norms and discipline as an essential condition for the extension of credit.

Bank Credit and Deposits

(April—March)

	(Rs. crores)	
	1982-83	1983-84
Bank credit expansion	5,812	5,504
	(+19.6)	(+15.5)
Aggregate deposit growth	7,625	9,178
	(+18.0)	(+17.9)
Credit-deposit ratio (end-June)	69.1%	67.7%

Note: Figures in brackets indicate percentage variations.

Against the background of a rapid growth of liquidity in recent years, a significant increase in reserve money creation and a rise in prices despite a record

food crop, credit policy for the slack season of 1984 emphasised the need once again for moderating the rate of growth of liquidity and thereby curbing inflationary expectations. In order to provide resources for vital public sector investment within the framework of national priorities, it was decided to raise the statutory liquidity ratio by one percentage point in two stages to 35.5 per cent effective from July 28, 1984 and to 36 per cent effective from September 1, 1984. It was also decided to release a part of the impounded cash balances as on October 31, 1980 before the onset of the 1984-85 busy season to prevent the emergence of any stringency in resources that may be needed to support the larger increase in output that was expected.

Monetary and credit trends

Monetary expansion during the fiscal year 1983-84 was larger than in the previous year in both absolute and percentage terms. M₁ (currency with public, demand deposits with banks and other deposits with Reserve Bank) increased by Rs. 4,491 crores or 15.7 per cent, as compared with the rise of Rs. 3,806 crores or 15.4 per cent in 1982-83. M₂ (M₁ + time deposits with banks) expanded by Rs. 12,699 crores or 17.4 per cent, as against Rs. 10,442 crores or 16.7 per cent.

Money Supply and Prices

(April—March)

	(Rs. crores)	
	1982-83	1983-84
Money supply	10,442	12,699
M ₁	(+16.7)	(+17.4)
Wholesale prices (1970-71=100)	+6.4%	+9.3%
Consumer prices (1960=100)	+11.2%	+9.8%

Note: Figures in brackets indicate percentage variations.

The factors which contributed to the acceleration in monetary expansion during 1983-84 were a higher increase in net bank credit to Government of Rs. 5,818 crores in 1983-84 than that of Rs. 4,734 crores in 1982-83 and the lower contractionary impact of the fall in the net foreign exchange assets of the banking sector (Rs. 104 crores as compared to Rs. 895 crores). Bank credit to commercial sector, on the other hand, recorded a lower rise of Rs. 7,929 crores than that of Rs. 8,796 crores in 1982-83. The accelerated growth in money supply continued during the April-June quarter of 1984 also with M₁ registering a further rise of Rs. 2,285 crores (6.9 per cent), as compared to the rise of Rs. 1,576 crores (5.5 per cent) in the corresponding quarter of 1983-84.

The rate of growth of deposits was higher both in absolute and percentage terms at Rs. 9,179 crores and 17.9 per cent, against Rs. 7,625 crores and 17.4 per cent, respectively. Bank credit, however, expanded at a slower pace by Rs. 5,504 crores or 15.5 per cent, as compared with Rs. 5,812 crores or 19.6 per cent in 1982-83. Expansion of Rs. 1,057 crores in food credit in 1983-84 was larger than that of Rs. 838 crores in the previous year, but non-food credit showed a smaller rise of Rs. 4,447 crores, as compared with

Rs. 4,973 crores in 1982-83. In the first quarter of the financial year 1984-85 (April to June), deposit growth at Rs. 3,315 crores was higher than that of Rs. 2,681 crores in the corresponding quarter of 1983-84. The pace of expansion in bank credit at Rs. 2,061 crores during the same period was faster than that of Rs. 513 crores in the same period of 1983-84. Food credit rose by Rs. 1,211 crores and non-food credit by Rs. 850 crores during the period, as compared with an expansion of Rs. 624 crores and a contraction of Rs. 111 crores, respectively, in the corresponding period a year ago.

Trade balance

The merchandise trade gap widened from Rs. 5,526 crores in 1982-83 to Rs. 5,781 crores in 1983-84. Exports increased by 9.9 per cent to Rs. 9,676 crores, as compared with an expansion of Rs. 624 crores. Imports were higher by 8.9 per cent at Rs. 15,457 crores.

Foreign Trade (April-March)

	(Rs. crores)	
	1982-83	1983-84
Imports	14,360	15,457
Exports	8,134	9,676
Balance of trade	-5,526	-5,781
Foreign assets*	-377	+80

*Variations over the years ended June excluding drawals from IMF.

Balance of payments

The improvement in the overall balance of payments situation continued in the fiscal year 1983-84 and, encouraged by this improvement, the Government of India terminated the three-year Extended Fund Facility (EFF) arrangement with the International Monetary Fund (IMF) from May 1, 1984, about six months ahead of the date when it was to come to an end. Accordingly, under the EFF arrangement, India drew SDR 3,900 million or SDR 1,100 million less than the amount of SDR 5,000 million initially agreed to be drawn over the three-year period ending November 8, 1984.

Foreign currency assets

Developments in foreign exchange reserves and other indicators suggest an improvement in the external economic performance during fiscal 1983-84. The foreign currency assets of the Reserve Bank rose by Rs. 1,233 crores, as against a rise of Rs. 911 crores in 1982-83. Excluding the drawals in foreign currencies under the EFF arrangement of Rs. 1,197 crores and Rs. 1,893 crores, respectively, the foreign currency assets rose by Rs. 36 crores in contrast to a fall of Rs. 982 crores in 1982-83. During 1983-84 (July-June), foreign currency assets of the Reserve Bank recorded an increase of Rs. 5,712 crores. Excluding the drawals from the Fund under EFF of Rs. 916 crores and Rs. 39 crores of repurchase of CFF drawals, these assets would show a rise of Rs. 30 crores, as against the decline of Rs. 377 crores in the corresponding period of 1982-83, excluding the IMF drawals of Rs. 1,908 crores.

Exchange rate of the rupee

The exchange rate of the rupee continued to be determined with reference to a weighted basket of currencies. Adjustments in the middle rate of rupee in terms of pound sterling were made on 118 occasions during the year and exceeded marginally the 113 revisions in the previous year. The middle rate of the rupee moved from Rs. 15.45 on June 30, 1983 to Rs. 15.15 on June 29, 1984, recording an appreciation of 1.98 per cent over the period. The rupee appreciated also against French franc by 0.97 per cent and Italian lira by 2.46 per cent, but depreciated against the US dollar (9.76 per cent), Deutsche mark (1.25 per cent) and Japanese yen (10.53 per cent) and also against the SDR (6.62 per cent).

Government finances

The combined position of Central and State Governments' receipts and disbursements show that aggregate receipts in 1984-85 are budgeted to reach Rs. 63,338 crores, as compared with the budget estimate of Rs. 53,736 crores in 1983-84—a rise of 17.9 per cent which is more or less the same as in the previous year.

Budgetary Position (Central and State Governments)

	(Rs. crores)	
	1983-84	1984-85
	(Revised)	(Budget)
Receipts	58,200	63,338
Disbursements	60,747	65,708
Of which developmental expenditure	38,870	41,950
Net position	-2,548	-2,370

Aggregate disbursements are estimated at Rs. 65,708 crores in 1984-85, as compared with Rs. 55,832 crores in the budget estimates for the previous year—a rise of 17.7 per cent as compared with 16.5 per cent in 1983-84. The growth rate in developmental expenditure in 1984-85 is projected to increase substantially to 18.3 per cent from 13.4 per cent in the previous year, while the rate of non-developmental expenditure is expected to go down sharply to 14.8 per cent from 22.3 per cent in 1983-84.

Price situation

Although there was a sizeable growth in real output in 1983-84, the price situation remained disconcerting for the major part of the year. In fact, the rise in prices as measured by the index number of wholesale prices for 'all commodities' (base 1970-71 = 100) rose, on a point-to-point basis, by 9.3 per cent in the fiscal year 1983-84, against 6.4 per cent in 1982-83. The average increase in the index also worked out higher at 9.3 per cent, against 2.6 per cent. All the three major groups viz. primary articles, fuel, power, light and lubricants and manufactured products contributed to the price rise. However, it was the manufactured products group which exerted the maximum pressure on the price index. During the first quarter of the current fiscal year, although prices continued to rise, the percentage increase both on a point-to-point

(Continued on page 34)

Rheumatic heart disease

Dr. Rajen Tandon

The author, a leading cardiologist, here talks of the rheumatic heart disease including the rheumatic fever and suggests preventive and protective measures. He says except heart disease all other aspects of rheumatic fever do not cause permanent fever.

"RHEUMATIC FEVER LICKS the joints but bites the heart". Rheumatic fever is an acute inflammatory disorder characterised by specific symptoms and signs, initiated by infection of the throat by a group of bacteria called "group A Betahemolytic streptococci."

Prevalence

Rheumatic fever is a world wide phenomenon. It affects both sexes equally. The most common age when the fever attacks is between 5 to 15 years, though it can occur at any age. Population surveys in India indicate its prevalence to be around 2 per thousand.

20 to 50 per cent of all cardiac hospital admissions are for rheumatic fever induced heart disease. Survey in children indicates its prevalence to be 5.3/1000 children between the age of 5 to 15 years in India.

Predisposing factors

- (1) Unhygienic living conditions.
- (2) Undernutrition & malnutrition.
- (3) Over-crowded living conditions.

Adverse features of rheumatic fever

- (1) It affects the heart in 60 to 70 per cent cases. The resulting heart disease is in general permanent.

- (2) The heart disease is acquired in childhood and the suffering lasts for the rest of the life.
- (3) Rheumatic fever has a tendency of recurrence. If heart disease is present it will get worse with each recurrence. If heart disease is not present, it can occur with a recurrence.
- (4) Rheumatic fever can be prevented, but if it has occurred in a child it cannot be cured.
- (5) The diagnosis depends on clinical findings which overlap with some other diseases.
- (6) There is no investigation which is diagnostic for rheumatic fever.
- (7) The diagnosis is possible during the acute phase. However, if the heart is not involved the diagnosis in retrospect may not be possible.
- (8) Once the heart is damaged, medicines cannot cure this heart disease.
- (9) Operative treatment for rheumatic heart disease is also not a "Cure".
- (10) Once rheumatic fever has occurred, prevention of further attacks will have to be continued life long (ideally).

Features indicating rheumatic fever

10—15 days after the onset of the fever, streptococcal sore throat is followed. This fever is accompanied with joint pains with or without swelling, heart involvement, skin rash, nodules below the skin and abnormal movements of the body indicating brain disease.

(a) Joint disease : Occurs in 90 per cent cases. Large joints like ankle, knees, elbows and wrists are involved ; uncommonly smaller joints of hands or feet may be involved. Only subjective pain (arthralgia) may be present or the joint may be swollen, hot, red with limitations of movement (arthritis). The pain and

swelling come on quickly and subside spontaneously within 5 to 7 days. Generally multiple joints are involved in an episode although only one joint may be involved at one time. There is no residual damage to the joint.

(b) Heart disease : Occurs in 60-70 per cent cases. Starts early in the course of rheumatic fever. All layers of the heart are involved—the covering called pericardium, the heart muscle called the myocardium and the heart valves. The damaged valves result in leaking of blood. Over a period of time the valves may get fused resulting in obstruction to flow of blood. Damaged myocardium results in poor pumping function of the heart. Heart damage is permanent.

(c) Nodules below the skin tend to appear 4 weeks after the onset of rheumatic fever. They are not painful. They last for a variable period of time and then disappear, leaving no residual damage.

(d) Brain involvement manifests as abnormal jerky purposeless movements of the arms, legs and the body. They result in difficulty in walking, eating, writing or any finer movements. This manifestation is more common in female children. It lasts about 6 weeks and gradually disappears leaving no residual damage.

(e) Skin : Various types of skin rash is known due to rheumatic fever. Perhaps because of the darker complexion, the rash is rarely identified in our country.

It is thus obvious that except heart disease all other manifestations of rheumatic fever do not cause permanent damage.

Investigations

The investigations for the diagnosis of rheumatic fever are confined to two aspects : (i) To indicate the presence of an active disease (non-specific) ; (ii) To indicate the presence of streptococcal infection or recent streptococcal infection (non-diagnostic). There is no test which will conclusively prove that the child has rheumatic fever.

Treatment

Once initiated rheumatic fever cannot be "cured" by medicine. The treatment consists in (i) bed rest, (ii) nutritious diet, (iii) Penicillin therapy, (iv) suppressive drugs, (v) management of heart disease, if present, (vi) rehabilitation of the patient if heart disease is present.

Rheumatic fever runs a course of about 12 weeks in 80 per cent of the patients. In 20 per cent it can be longer. Suppressive treatment is indicated for 12 weeks. Suppressive treatment reduces the inflammation but does not cure it. The two drugs used for suppressive treatment are Aspirin and Corticosteroids. Aspirin has a weaker suppressive action than steroids, but has less complications compared to steroids. We prefer to use steroids in those patients who have heart involvement, reserving aspirin for those who do not have heart involvement.

The damaged heart

Two parts show specific persisting damage—the heart valves and the myocardium (heart muscle). There is no specific medical and/or surgical treatment for the damaged myocardium.

If valves have become obstructive the obstruction can be relieved by operation. If the valve is leaking the valve may be repaired or it may have to be changed. Rheumatic valve damage is such that valve change is more likely than repair, but the decision is possible only at the time of operation.

The commonest valve damaged is the mitral valve. This valve lies between the left side atrium and ventricle. The next commonest valve affected is the aortic valve, lying between the left ventricle and aorta. Both are involved in about 25 per cent cases. Mitral valve is involved in all those who have rheumatic heart disease.

Indications for operation

The indication for operation is when the heart is not able to cope with the requirements of the body at rest or at work.

Milder damage of the valves is compatible with a normal life span. As such every patient with heart disease is not a candidate for operation. The patients require to be followed up by the physician at six monthly or yearly intervals. Electrocardiograms, X-rays and other investigations may be required from time to time. Depending on the symptoms of the patient and findings the physician decides as to when an operation is necessary (Physicians believe that God-made valves are better than man-made valves).

Prevention of rheumatic fever

It must be reemphasized that rheumatic fever is preventable, but once it has been initiated it cannot be cured.

Most of the developed countries have been able to control rheumatic fever and rheumatic heart disease. The decline appeared even before penicillin became available.

Non-medical means of controlling rheumatic fever are related to improving living conditions and socio-economic status :

- (1) Improve sanitation & hygiene.
- (2) Improve nutrition.
- (3) Prevent over-crowded living.
- (4) Awareness regarding hazards of sore throat and the specificity of preventing heart disease by penicillin.

Specific prevention

Specific prevention is possible with the use of penicillin.

Ideally a sore throat should be swabbed and cultured. If streptococci are present the child should be

put on penicillin. Since facilities for throat culture are not easily available, it is justified to treat a sore throat with penicillin even without having the culture. For this purpose one injection of penicillin containing 3,00,000 units of crystalline, 3,00,000 units of procaine and 6,00,000 units of benzathine penicillin is enough (available as one injection). Alternatively, 4,00,000 units of procaine penicillin may be given twice daily for 10 days.

If a patient has had rheumatic fever, prevention of further attacks is possible with injections of Benzathine Penicillin given every 2 or 3 weeks. This will have to continue (ideally) life long. Less than ideal would be to continue upto the age of 35 years. The injections are painful, but the pain is less than life long suffering due to heart disease.

Benzathine penicillin

12 lac units, intramuscular, every 21 days—17 injections per year. Cost of penicillin Rs. 67/- per year.

6 lac units, intramuscular, every 15 days = 26 injections per year. Cost of penicillin Rs. 57/- per year.

Note

Adverse reactions to penicillin are very rare in children. Adverse reactions to Benzathine penicillin are also very rare.

"Prevention is better than cure." Fortunately, rheumatic fever can be prevented but unfortunately, it

cannot be cured. Protect your child's heart.

1. Do not neglect sore throats.
2. If a child complains of joint pains consult a doctor immediately. The diagnosis may not be possible in retrospect.
3. If one child has sore throat, all children should be checked. Streptococcal infection is contagious, but rheumatic fever is not.
4. Unexplained fever—even in the absence of joint pain symptoms—can be rheumatic fever.
5. A fever associated with chest pain or followed by palpitation or shortness of breath in a child could be rheumatic fever.
6. If the child has had rheumatic fever it is the responsibility of the parents to ensure continuation of penicillin to prevent further attacks of rheumatic fever and further damage to the heart.
7. Penicillin injection given every 3 weeks may cause pain only for 17 days in a year. (If given every 2 weeks the pain is only for 26 days in a year).

This is certainly a much better proposition than suffering every day for the whole life. □ (Based on public lectures series of All India Institute of Medical Sciences, New Delhi).

(Continued from page 6)

development of the oil fields discovered will be continued. A significant development is the increase in recoverable gas reserves; these are 475.3 million cubic metres (435.2 million tones of oil equivalent). Their optimal exploitation is under the consideration of the Government. Increase in refining capacity particularly linked to the crude that will have to be imported will depend on the world situation of availability of products as against crude oil.

Energy conservation

Earlier we have mentioned about the potential for energy conservation. The progress so far has been slow. The reasons are :

- (a) Energy pricing policies that have not encouraged economy and efficiency in the consumption of power and coal;
- (b) Delays in initiating studies to assess energy conservation potential, investment requirement and priorities;
- (c) Lack of ready access to suitable, reliable equipment, technical information and support;
- (d) Lack of an industrial framework that is capable of coordinating the planning and implementation of a comprehensive energy conservation programme; and
- (e) Weak institutional research and extension programme.

The above impediments are now sought to be removed through the creation of an Energy Conservation Fund and a high powered body to provide leadership and a sense of direction and urgency to the entire programme in an integrated manner.

Nuclear energy

The installed capacity of nuclear power stations is 1095 MWe. A capacity of 1175 MWe is under construction and with this the total will be 2270 MWe. It is now suggested to take up additional 12×235 MWe and 10×500 MWe units with a view to achieving a capacity of 10000 MWe by the end of 2000, a mere 10 per cent of the power capacity. This is a modest target as compared to 41 per cent for Taiwan, 27 per cent for Japan and 41 per cent for Korea. Recent studies reveal that a nuclear power station as compared to a coal based thermal station is cheaper by 30 per cent to 70 per cent except in those countries where coal is available cheaply. Considering the recent escalations in plant and equipment costs of a thermal plant, the coal prices and the problems in its transport, a similar situation will arise in our country when away from the coal mines a nuclear project will be more economical than a thermal station. However, considerable organisational efforts will be required to cut the present completion period of about 14 years to 8 years.

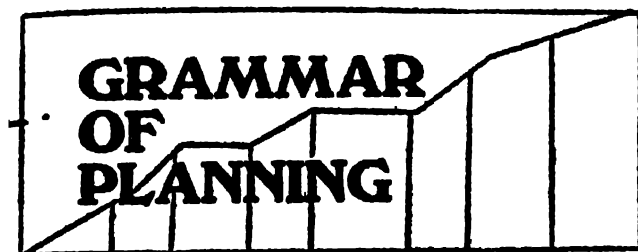
New sources of energy

In the Seventh Plan, an ambitious programme is being drawn up for implementing the schemes of biogas, windmill and solar energy □

1983 Demographic estimates for Asian and Pacific countries in the ESCAP region

Country and region	Mid-1983 population (thousands)	Average annual growth rate (per cent)	Crude birth rate	Crude death rate	Total fertility rate
ESCAP	2 621 318	1.73	27.7	10.5	3.5
EAST ASIA	1 204 189	1.28	20.3	7.6	2.4
China	1 037 862	1.33	21.1	7.8	2.5
Hong Kong	5 313	1.50	16.5	4.9	1.9
Japan	119 260	0.68	12.9	6.1	1.8
Mongolia	1 803	2.65	33.6	7.2	4.8
Republic of Korea	39 251	1.58	22.6	6.0	2.6
SOUTH-EAST ASIA	381 895	1.99	31.0	11.0	4.0
Brunei	709	4.23	29.8	3.9	—
Burma	35 183	2.00	34.0	14.0	4.7
Democratic Kampuchea	6 888	2.85	45.1	19.3	5.1
Indonesia	159 474	1.75	30.3	12.9	3.8
Lao People's Democratic Republic	3 941	2.28	40.5	15.5	5.8
Malaysia	14 736	2.23	28.6	6.4	3.5
Philippines	52 095	2.47	32.0	6.8	4.2
Singapore	2 502	1.20	17.3	5.2	1.7
Thailand	49 568	2.05	28.2	7.6	3.5
Viet Nam	57 039	2.01	21.7	10.9	4.3
SOUTH ASIA	1 011 463	2.16	35.5	13.8	4.7
Afghanistan	14 281	2.25	35.4	26.9	6.9
Bangladesh	95 830	2.72	41.5	17.3	6.1
Bhutan	1 360	2.03	38.3	18.0	5.5
India	729 704	1.97	32.9	13.2	4.3
Iran	42 518	2.97	39.7	10.0	5.6
Maldives	168	2.78	44.5	12.9	—
Nepal	15 738	2.33	41.5	18.2	6.2
Pakistan	96 227	2.73	42.3	15.0	5.8
Sri Lanka	15 634	1.83	26.8	6.6	3.3
PACIFIC	23 771	1.75	20.5	8.4	2.7
Australia	15 406	1.58	15.8	7.6	2.1
Cook Islands	18	-0.41	26.3	6.3	4.1
Fiji	663	1.64	27.0	4.1	3.1
Guam	117	1.27	28.9	3.9	—
Kiribati	61	1.61	34.9	14.0	4.7
Nauru	8	0.00	—	—	—
New Zealand	3 203	1.41	16.2	7.4	2.0
Niue	3	-3.08	31.6	6.6	—
Papua New Guinea	3 508	2.68	40.1	13.4	5.9
Samoa	161	0.87	31.4	8.0	6.7
Solomon Islands	259	3.77	44.6	11.7	7.3
Tonga	103	2.07	37.9	9.0	—
Trust Territory of Pacific Islands	123	2.50	30.0	4.1	—
Tuvalu	8	1.28	34.8	7.8	2.8
Vanuatu	130	3.21	—	—	—

Source : ESCAP Population Division



P. R. Dubhashi

In the previous chapter, the author dwelt at length on the patterns of planning organisation, different in structure, strength and character—formulated to meet the needs of varied administrative and economic systems. Here he discusses the factors which are to be taken into account for successful implementation of planning programmes. The success of planning is not judged merely by its internal consistency or methodological sophistication, but by the extent to which the plan succeeds in its actual implementation. Implementation is an integral part of the process of planning itself, he says.

THE PROCESS OF PLANNING is not completed with the preparation of plan documents. Its consummation lies in its implementation. Implementation, therefore, is an integral part of the process of planning itself. There can be no dichotomy between formulation and implementation of plans. Indeed there is a continuum between plan formulation and implementation.

The success of planning should not be adjudged merely by its internal consistency or methodological sophistication, but by the extent to which the plan succeeds in its actual implementation.

If this is true, then it would not be correct to say, as is often said that the plan is all right but its implementation is defective. This alibi is frequently resorted to by the planners to cover the deficiencies in their own planning. Amongst the many constraints which wise planning has to take into account are constraints in the machinery of implementation of the plans. In the words of W. Arthur Lewis : "It is unquestionably a mistake to lead on to the administrative service a bigger programme than it can efficiently execute". Unrealistic assumptions regarding the

The implementation of planning

capability of such machinery, must be considered to be one of the defects of the plan formulation itself.

Unrealistic planning

Unrealistic planning, projecting an impossibly high rate of growth, stretching ambitions beyond the limits of available resources, may result in the formulation of a plan which is not capable of implementation. In the words of W. Arthur Lewis : "Needs are unlimited, a plan based on needs rather than resources is an advertisement, a propaganda exercise rather than an instrument of control". He believes that the rate of growth of an economy cannot be immensely different at the end of the Five Year Plan period than from what it was at the beginning. Thus, unrealistically high targets are bound to create problems like bottlenecks in the supply of raw materials, plant and machinery, manpower and foreign exchange, the sum total of which may well result in a spiral of rising prices eroding the very basis of the plan itself. Like politics, planning is also the art of the possible.

Even if the plan is formulated in a realistic manner, the problem of its implementation still remains distinct and needs careful attention. As Barbara Wootton says : "It is stupid and inefficient to make a plan and then fail to carry it out. Insofar as production of goods and services is deliberately planned, people, plant and material must be got together on the job of producing goods and services." The method of doing so consists either of legal compulsion and regulation or economic inducements.

If, at the stage of planning formulation, planning is mainly economic in nature, at the stage of implementation, it is mainly administrative and managerial. Indeed both have to be correlated.

The implementation broadly consists of three parts—first, formulation of the policies and their execution, second, formulation of programmes and their implementation, and the third, operational plans or the individual economic units and institutions.

Supportive policy framework

The aggregative targets of planning have to be supported by a suitable policy framework. The policy framework consists of a package of measures which

will help promote activities for the realisation of plan goals and at the same time hinder hindrances to such an effort. It is thus a package of promotional as well as regulatory measures. The latter would consist of both fiscal and physical measures.

In a centralised or totalitarian system of planning as in socialist countries, the reliance is, in the main, on physical control while decentralised and market-oriented planning for a mixed economy makes greater use of measures of incentive and inducement. To quote Bauchet, in the latter system, which he calls flexible planning, "in at least part of public sector the financial authority exercised by Finance Ministry over firms is probably as "impervious" as the means of application adopted in Soviet Planning. But in the rest of the economic field, the means of fulfilment—grants, loans, tax relief, public works contracts, are used indirectly and may be more properly described as incentives. Much is achieved by persuasion by pointing out the advantage to be gained through participation in the system of development outlined in the plan."

The French planning

Should the sanction behind plan implementation consist of an elaborate and amplified structure of policies and measures or should it be selective or strategic in nature ?

The French planning stipulates that the number of means of enforcement should be limited if the Plan is to retain its flexibility. It is characterised by the twin features of small number of means of enforcement and greater reliance on financial measures. As Bauchet observes : "Fewer the decisions taken by a planning organisation, the more effective they will prove. This axiom has been corroborated in the centralised socialist economic systems and is truer still in the western ones out... Intervention is carried out indirectly through financial measures rather than by direct constraint... While constraint still has its value at times it should be used as rarely as possible."

While basic industries in the private sector are cleared as investment projects by Commissariat général du Plan, for other sector the clearance is given by the Directorate of Industrial Production. Half the investments are financed by the Fund for Economic and Social Development by public loans. The general body of the Fund draw up an annual investment programme for each of them. Enterprises not dependent on public funds have greater operational autonomy.

Price control in cases of concentrated manufacturing activities and quasi contracts with the manufacturers of capital goods, which bind them to carry out a clearly defined programme of investment in return for financial support, are other methods of enforcement. There is also the device of programme laws as a part of the Act approving the Plan. They enable an enterprise to undertake work covering a number of years enabling the entrepreneurs to lay down long term investment policies and enter into terms with suppliers.

The policy measures in support of planning could be itemised as follows :

Planning by inducement

1. Fiscal and budgetary policies
2. Monetary and pricing policies
3. Wage and income policy
4. Banking policies

Planning through the physical controls

5. Licensing policies and capital issue policy
6. Policies regarding allocation of raw materials
7. Foreign exchange policies
8. Policies regarding procurement and public distribution

Planning through promotional measures

9. Policies regarding technical help and supervision
10. Training policies and supply of training facilities
11. Research and development.

Budget is an instrument of annual planning. Traditional budgeting is not quite suitable from the point of view of planning. Budgetary documents have, therefore, to be suitably altered so as to exhibit the allocation of resources for various planned programmes. Performance budgeting is a concept which is more in tune with the concept of planning.

Budget is not merely a statement of expenditure. It is also a set of measures of taxation, direct and indirect, and other ways of raising resources. Taxation not only provides a source of plan finance, it is, in addition, an instrument of encouraging and discouraging economic activities. It is also an instrument for redistribution of income and is, therefore, connected with the income policy of government. Taxation has to be used as a device for preventing the use of economic resources for production of goods and services which have a low priority in the plan scheme discouraging speculative economic activities or ostentatious consumption.

Crucial significance

The monetary and pricing policies are of crucial significance to the orderly process of planning. Planning with stability is a slogan of considerable practical significance. Wrong fiscal, monetary and pricing policies can lead to run away inflation which can completely erode the process of planning itself. Where the pricing process itself is abolished, as in a socialist economy, planners may not have to bother with the problem of prices but the problem is bound to surface in other forms. A cheap money policy is necessary where one of the goals of planning is the revival of the economy. However, where economy is over heated, where the investment is greater than the savings available, where resources are inelastic, where

production is stagnant or shortages become chronic, a dear money policy together with selective credit control will be helpful in curbing inflationary tendencies.

Buffer stocks

One of the effective ways of controlling prices is measures for the building up of buffer stock of various final and intermediate commodities in order to support the public distribution system. The procurement of various commodities requires an executive machinery often known as food and civil supply organisation. The machinery has to provide a link between production and consumption. It has to procure goods at various points of production, store them and make them available through a network of public distribution system. Thus foodgrains and cotton will have to be procured from the farms while sugar, cloth or steel and cement may have to be procured from the factories.

The procurement price becomes an important issue of planning. Agricultural Prices Commission is set up to recommend prices for procurement of agricultural commodities which would be reasonable both to the producer and the consumer. However, it is not easy to fix prices satisfactory both to the producer and the consumer. From the point of view of curbing inflation, low prices would be justified. However, the producer must have an incentive and, therefore, would demand higher prices.

Procurement price

If the demands of the producers are conceded and higher prices fixed, the consumer may have to be subsidised. However, the cost of the subsidy must be borne by the public exchequer and this is difficult when the financial resources are barely adequate for planning.

- One of the problems of plan implementation is the choice of agency for procurement and public distribution. A network of cooperatives can take up the responsibility provided they are honest and fairly efficient. Whether cooperative or state, if the machinery is ridden with inefficiency and corruption it can defeat the aim of public distribution system.

Wage policy

The wage policy is connected with pricing policy. Where prices and profits are kept under control, regulation of wages is possible. If, however, the condition is not fulfilled, labour more and more militantly organised through trade unions, is bound to demand higher wages leading to a snowball process of inflation with wages chasing rise in prices and rise in prices creating fresh demand for rise in wages. An integrated income policy has to be a built-in feature of planning.

Wages provide the price mechanism for the allocation of labour or manpower between the various occupations. Choice of employment being a fundamental liberty, industrial conscription or compulsory direction of labour may not be possible in ordinary times and wage differentials will be the instrument

for adjusting supply of labour with demand. The planned economy is likely to make certain kinds of technical skills more and more scarce and these will have to be paid for at higher rates. On the other hand, arts graduates, fit to fill only clerical jobs, will attract lesser remuneration.

The wage policy may have to be supplemented by the institution of employment exchanges. In the words of Barbara Wootton, "Smooth distribution of labour in a planned economy would be facilitated by compulsory notification of all engagements and termination of engagements to the employment exchanges."

Role of banks

The banks have to play an important role in mopping up deposits and giving advances. The banks have to attract savings by offering better interest rates. But their efforts have to be within the framework laid down by the central banking authority. In a developing economy, which is also progressively monetised, there is a considerable scope for spreading the banking habit amongst the people who have never known banking before. The banking policies have to be in tune with the planning policies and bank advances directed towards the sectors to which the plans accord a priority.

It is more and more realised that the planning should not merely be confined to the budgeted resources. In planned economy, the bank resources have also to be mobilised to realise the goals of planning. Therefore, banks must produce plans which must find a place in and be integrated with the economic development plans as a whole.

French planning is based on linking banking activities with economic planning. Instead of being guided exclusively by traditional commercial considerations when granting loans, they would make their selection with a view to promoting schemes laid down as priorities in the plan and brought to their knowledge by direction on credit. The whole credit apparatus is placed at the service of the Plan's investment programmes and closely coordinated with budgetary policy, giving a unity of action.

Social control

One way of achieving integration of banking with the general economic policies is to exercise social control over the banking. The other alternative is the nationalisation of banks. Even in non-socialist countries like France, major banks have been nationalised. Following the example, India nationalised the 14 biggest banks on 19th July, 1969. But nationalisation would not solve all problems. It is still necessary for the banks to be so managed as to fill the objectives of planning without sacrifice of sound principles of banking and financial discipline.

Where all the means of production are not socialised and there is a substantial sector of private industry, the instrument of licensing policies and regulation of industry and monopolies are often employed to encourage enterprises of the right sort and

discouraging enterprises of the wrong sort. Thus licensing policy may aim at promoting labour intensive, small-scale, mass consumption goods industry as against capital intensive, monopolistic and luxury goods industries. Licensing policy may also aim at proper location of industry, e.g., to prevent further industrial pressure in an already over-crowded, encouraging industry in backward area, or creating employment opportunities where they are needed. One of the difficulties of such licensing policy is the delay involved in scrutiny of applications and the discouragement it causes to the industrial development. Planning authorities have, therefore, to take special care to keep licensing procedures efficient and prompt.

Capital issue policy is intended to see that capital is not allowed to flow in undesirable or less desirable sectors like luxury building or speculative enterprises. If capital market is left to itself too much capital would be sucked away for these purposes simply because those who float such enterprises are able to provide the necessary security.

Rationing of raw material

Just as rationing of consumer goods is necessary for just distribution of consumer goods, similar rationing of raw material is required for industrial development which is consistent with plan targets. Industries cannot reach the targets entrusted to them unless supply of raw materials is ensured. Where the raw materials are in short supply, there would be tendencies of the prices of such raw materials to rise, and if their prices are controlled there would be a tendency for them to disappear in the black market. Even socialised countries are not free from such problems. There is chronic tendency among enterprises in a socialist economy to keep huge piles of raw materials in short supply thereby further accentuating scarcities and increasing the difficulties of other enterprises.

It may also happen that while raw material or intermediate products are transported at a considerable cost to distant enterprises, they are not available to a nearby factory. Like the public distribution system of consumer goods, the allocation system of raw materials has also to be efficiently managed.

Where certain plants or machinery or raw materials are not domestically available, they have to be imported and imports require foreign exchange. A planned economy cannot allow foreign exchange resources to be freely drawn upon since they have to be conserved for realising plan targets. Foreign exchange allocation, therefore, becomes a critical part in the process of plan implementation. Sometimes foreign exchange for imports are linked up with ability to export. This may not be justified since this will unnecessarily discriminate against an industry which is of significance to the domestic economy though it may have little export potentiality.

Technical expertise

Technical supervision training facilities and research and development are some of the policies of

critical significance for the promotion of activities though their importance may not always be recognised in the short run. Extension of technical knowledge is of a far greater significance for achieving the goals of planning than even financial assistance. In field of agriculture, Arthur Lewis has pointed out: "Investment of one per cent of national income in technical extension can raise national income by half per cent." Research and development contribute greatly to the introduction of innovations which can entirely change the production possibilities.

To some extent, problems of marketing are solved through the public distribution system. But, in addition, facilities like godown and storage and transport have to be made available including a system of marketing intelligence, grading and standardisation. Indeed, these have to be considered as one of the sectors of planning.

Programme execution

The policies have to be executed along with the execution of programmes. Programmes and projects have to be planned and designed in all sectors of the plan. They constitute the substance of planning. Programme planning linked up with aggregative economic planning has to be a constant activity of the executive agencies in a planned economy.

Formulation of goals and objectives, tasks and targets, schemes and programmes, arrangements of necessary inputs—from year to year, season to season—constitute administrative planning which has to go hand in hand with economic planning. For this, the executive agencies will have to use the various techniques of planning, like network analysis, critical path method and PERT. The members of civil service, who man the executive agencies, have to be trained in these new techniques. In the absence of a trained civil service, successful implementation of plan cannot be ensured. That is why W. Arthur Lewis has observed: "Development planning is hardly practicable until a country has established a civil service capable of implementing plans."

Plan goals cannot be realised even in a specific field as a result of the efforts of only one executive agency. It is necessary to coordinate the activities of a number of executive agencies and this coordination must result in meaningful sequence of activities properly synchronised so as to lead to timely result. Thus planning has to enter into the warp and woof of administrative and executive action throughout the entire gamut of public administration.

While programmes are intended to direct the efforts of individuals and institutions along plan channels, each institution or enterprise, whether in public, private or cooperative sector, must have a plan of its own which is consistent with the general framework of planning. Planning by an enterprise is a microcosm of national planning.

The manager of every enterprise has to be a planner. He must fix goals and targets with the framework of aggregative plan targets. The time table of activities, the necessary financial and physical inputs,

(Continued on page No. 34)

A Peep into tribal life

The Saora Highlander : Leadership and Development—By Bhupinder Singh; Somaiya Publications Pvt. Ltd. New Delhi. 1984. PP. 198. Price Rs. 90

FROM TIME-TO-TIME, there has been contribution to leadership and development by scientists belonging to different disciplines—psychology, sociology, anthropology, political science, etc. The latest addition to the subject is by Bhupinder Singh who examines leadership and development in the context of a little Mundari-speaking community, the Saora. It goes without saying that an understanding of the existing pattern of leadership among such an isolated tribal group would go a long way in promoting development programmes among them through case work, group approach, and community organisation. The theme has been examined by the author holistically in the backdrop of total way of life and culture of this simple community—establishing a part-whole relationship. Through this approach the distinction between the 'mono-morphic' and 'poly-morphic' types of leadership becomes very scientific.

The book brings out many of the conceptual and methodological issues. It is divided into seven main chapters besides three appendices. The foreword to the book has been written by Haimendorf.

The book starts with the description of the Saora culture in the context of their economic, social, political, religious organisation, etc. followed by a discussion on the geographical setting of the tribe in chapter two. Theoretical and conceptual aspects of leadership are the main theme of chapter three. Appropriately, relevant contributions of other well-known authorities on the subject have sharpened the focus of the author's theoretical orientation. It has helped in analysing the types of levels of leadership (chapter four), followed by deliberations on political affairs and leadership. In the last chapter of the main body of the book, the characteristics of leaders and their influence on village development have been the main theme in which social, demographic, economic, psychological, political characteristics, etc., have been discussed appropriately. Before unfolding his conclusions, the author gives a resume and present the status of the Saora community in the context of a dynamic socio-economic and political scene of the country.

After going through the book one cannot but commend the author for planning and conduct of the study, synthesis of the synchronic material with the diachronic and scientific precision. He is one of those few who have, in recent times, revived the erstwhile tradition of civil service by uniquely

combining scholarship with administration. Such a tradition would go a long way in incisive comprehension of the latent as well as the apparent problems of planning and administration of tribal development programmes with all their ramifications. It would further help develop a functional approach to the totality of the situation. The insight of perceptive administrators can facilitate interpretation of both qualitative (ethnographic) and quantitative data in a meaningful manner.

The book contains tables, diagrams, maps, charts, and photographs which act as suitable illustrative material. Written in a lucid style, the book would be found useful by students of society and culture as also those connected with tribal development administration.

Priced heavily, genuine researchers may be deprived of a personal copy for frequent reference. Would it not be worthwhile to bring out a paper-back edition to suit the common man's pocket?

B. N. Sahay

The aspects of foreign exchange

Principles of Foreign Exchange : Vol I & Vol II. By A.K. Chatterjee; Himalaya Publishing House, "Randoot", Dr. Bhalerao Marg, Bombay: 400 004, 1984; Pages 719 & 389 Price : Rs. 125 & Rs. 80

MR. A. K. CHATTERJEE, FACULTY MEMBER Northern India Banks' Staff Training College (New Delhi), has, in this two-volume book, undertaken a wide scrutiny into the various and varied aspects of foreign exchange business. As both foreign exchange and international trade are inseparable, the author's inclusion of such recent events as UNCTAD VI, global liquidity and external debt of LDCs in this revised and second edition is commendable. He has taken care to explain elemental theories and concepts of foreign exchange, exchange rate, international trade, IMF, World Bank, IFC, IDA, OECD, OPEC, GATT and UNCTAD. Though theories of trade and exchange rate systems abound in these volumes, they do not detract the scope and utility of the book.

Under the chapter dealing with foreign exchange market and rates, the author has explained in enough detail as to how foreign exchange rates are computed and factors that cause fluctuations in exchange rates. Even recourse to mathematical models does not deprive the basic simplicity and cautionary approach of the author in that such an exercise is purported not to cloud the grasping capacity of the reader but to inculcate the rudiments of the subject taken up.

Mention must be made of the chapter dealing with contracts, credit and documents. The discussions spanning some ten useful chapters include specific credit documents such as transport documents, foreign drafts and insurance documents. Discussion of general aspects of sale and purchase

contracts, definitions, functions and types of documentary credits, contract between credit party, important credit clauses, procedure for issuing credit, specific documents mentioned above and arbitration and conciliation also follows.

This part of the book is not meant only to those who are interested in a study of this aspect of foreign exchange but also to those who have to deal with this subject in a pragmatic manner. Chapters on exchange control and trade control are also executed with great care and circumspection.

Besides, the book also encompasses various aspects of foreign exchange like institutional finance, role of the Central Government in export promotion, export finance, role of credit insurance agencies and off-shore banking and non-resident investments. Despite some overlapping in the discussion on foreign exchange markets and rates in Volume I of the book and an analogous section in Volume II, the fact that the author has shown scrupulous caution in including the latest developments is also borne out by the inclusion of customs and practice for documentary credits 1983 revision, though as an appendix.

While the overall usefulness of these two volumes as a *vade-mecum* for aspirants to the banking career as well as senior managers and people interested in foreign exchange system and international trading system is simply in disputable. The rather high cost of the book deters interested readers from buying these volumes as reference material and this can be solved if the publisher or author takes up interest in dovetailing these two volumes into one and inexpensive paper-back edition.

G. Srinivasan

(Contd. from Page No. 29)

plans for the procurement of these finances and inputs, inventory planning, manpower planning etc., constitute the elements in the corporate plan of every enterprise. Every enterprise must have a budget of its resources so as to ensure maximum return from finances, raw material, manpower, floor space, etc.

Such corporate planning is possible only if enterprises are run by professional managers well versed in techniques of management. To augment such managerial talent is one of the goals of planning. As W. Arthur Lewis says, "given such professional management, public enterprise can be as dynamic as private enterprise."

Economists tend to confine the discussions of planning only to the aggregative aspects, or only to their formulation. The administrators or managers are bothered only about their own difficulties. What is required for successful implementation of plans is link up of macro planning of economists with micro planning of administrators and managers.

(Next Issue : The Process of Planning)

(Contd. from Page No. 17)

of the labour inputs, the distributional aspect is taken care of. This will gradually eliminate the need for special programmes for rural and urban populations. In the present situation, the assetless rural and urban population does not find gainful employment and even if the people get employment, the income is so meagre that it does not provide enough to reach the threshold of the poverty line. We have, therefore, the 'unemployed poor' and the 'employed poor'. The 20-Point Programme's main thrust is on improving the living conditions of this group of people. It has to be a time-bound targeted approach to become effective in solving the major problems of the economy. The scheme of economic democracy would give priority to the problems of poverty.

(Contd. from page No. 11)

change surplus and a balanced structural growth of the economy.

The extent to which we have been able to achieve these objectives in recent years has however been limited, for after all the export-import account of a country is also largely dependent on the state of its structural equilibrium, its rate of real vis-a-vis absolute economic growth, and the status and prestige its currency commands in international trade, commerce and money market. In all these respects, we have unfortunately not been doing very well in recent years.

(Contd. from page 24)

basis and on an average basis was less than in the same quarter of the previous year. With the exception of pulses and edible oils, most of the other essential commodities like cereals, fruits and vegetables, milk and milk products, sugar, khandasari and gur recorded smaller increases in prices during the first quarter of the current year as compared with the same quarter last year.

The all-India consumer price index rose by 11.2 per cent during the year 1983-84, as compared with a rise of 9.8 per cent in 1982-83. On an average basis, the increase was 12.6 per cent, as against 7.8 per cent in 1982-83. □

Indrail Pass Tickets

Indrail pass tickets have earned up to March 1984 a sum of \$ 69,65,316 (US Dollars) from foreign tourists. During the period April 1983 to March 1984, a record number of 8,410 Indrail Pass tickets were sold giving the Railways an earning of \$ 9,73,031 (US Dollars).

The scheme was introduced in June 1977 to facilitate rail travel of foreigners visiting this country. Efforts are afoot through our foreign missions to make the scheme more popular.

India to attain self-sufficiency in zinc

WITH THE DISCOVERY of the largest and richest deposit of Rampura-Agucha in Bhilwara district (Rajasthan) having 60.35 million tonnes of ore with 13.48% Zinc metal and 1.93% Lead metal content the country will reach near self-sufficiency in Zinc and reduce the import bill of Lead substantially. This was disclosed by Shri N.K. Panda Additional Secretary Union Department of Mines in New Delhi recently.

The Central Government is considering an integrated proposal of Hindustan Zinc Ltd. for development of new mines of Rampura-Agucha and Baroi and setting up of a new Lead Zinc smelter complex near village Chanderiya in district Chittorgarh (Rajasthan) With the commissioning of these new projects the country will make a breakthrough towards self sufficiency in Zinc and substantially cut down Lead imports.

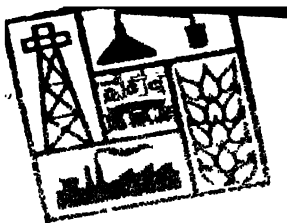
At present there is a wide gap between indigenous demand and production in the country. During 1983-84, the total import of Lead amounted to 24,091 tonnes and of Zinc to 49,112 tonnes. The estimated imports of the two metals during 1984-85 is 35,000 tonnes Lead and 55,000 tonnes Zinc.□

Our homage



November 1917—October 1984

“Rarely in history has one single individual come to be identified so totally with the fortunes of a country. Smt. Indira Gandhi became the indomitable symbol of India’s self-respect and self-confidence. She was brutally assassinated when she was at her peak, when her stature and influence were acclaimed the world over.”



VOL. 28 NO. 23

Strategy for removal
of poverty

Vedana

DECEMBER 16—31, 1984 RUPEES 150

Space technology
for India

NEXT ISSUE

Testing voluntary
agencies

A TOTAL OF 20 062 MILLION TONNES of foodgrains were available in Government stocks on October 1, 1984. Out of this, rice accounted for] 3 159 million tonnes, wheat for 16.872 million tonnes and coarse grains for 31 thousand tonnes. On the same day last year, the Government had 14 011 million tonnes of foodgrains in its stocks, out of which the share of rice was 1.899 million tonnes, wheat accounted for 12.01 million tonnes and coarse grains 1.02 lakh tonnes. Never before on this date, such a large quantity of foodgrains was available in Government stocks. This exceeds even the largest ever stock of 19.844 million tonnes available with the Government on October 1, 1979. During this year, the largest stock of foodgrains available with the Government was on August 1, 1984 when the quantity exceeded 22.4 million tonnes.

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Strategy for removal of poverty

Justice P.N. Bhagwati

The conventional welfare approaches have had the opposite effect of perpetuating and reinforcing the dependency and powerlessness of the poor. It is, therefore, necessary to develop the alternative strategy of organising the poor so that they are able to act on behalf of their own interest individually as well as collectively, says the author.

I AM CONVINCED that if we want to bring about change in the social and economic structures that are responsible for poverty and ignorance, it is absolutely essential to operate through social action groups.

Our society is still a status oriented and caste-ridden with marked inequalities among the different strata of society. These social inequalities interact with economic inequalities and in the process, each strengthens the other. The result is that the element of assertiveness on the part of the poor is largely absent.

Non-participation of poor in development

The poor are unable on account of their poverty to participate effectively in the political process at various levels and the direct consequence of this is that though legislation presumably intended for their benefit is passed by the legislatures, it is often hedged in by qualifications and exceptions and does not go far enough to meet the needs of the poor and, if I may say so, bluntly, it is willing to strike but afraid to wound powerful sections of the community. Even where there is well drafted comprehensive legislation.

Excerpts from the inaugural address of a seminar on Effective Uses of Law by Social Action Group held recently in New Delhi.

such as, the Contract Labour (Regulation and Abolition) Act, the Bonded Labour System (Abolition) Act and the Inter-state Migrant Workmen (Regulation and Condition of Service) Act, it is often not properly and effectively implemented in the interest of the poor and disadvantaged persons for whose benefit it is enacted.

Much of the socio-economic legislation passed by the legislatures has remained paper tiger without teeth and cloth. Even various social and economic rescue programmes initiated by the Central and State Governments through administrative measures have not been successful in making changes in the life conditions of the weaker sections of the community. There have been cases where some of these legislative and administrative measures have benefited the people but the benefits have been confined to the upper crust of weaker sections and they have not reached the lowliest amongst the low and the weakest amongst the weak.

Strategy for social action group

Our social action groups have, therefore, to evolve a strategy which is directed towards bringing about change in the social and economic structure which are responsible for the creation and perpetuation of poverty and denial of justice to the large masses of people. First and foremost it is necessary to make socio-legal investigations for identifying what are the injustices from which the deprived and vulnerable sections of the community suffer within the geographical area of their operation, what are the deprivations of basic human rights to be suffered by them and what are to social and economic entitlements whether under legislative or administrative measures which do not reach them. The social action groups should also ascertain by socio-economic survey as to whether there are any detrimental effects on the poor of the policies and programmes of the government as also whether there are any inconsistencies between its policies and actions on the one hand and the aims and principles it professes on the other.

The second arm of the strategy to be adopted by social action groups is education of the poor and the disadvantaged. The poor must be made aware of the rights and benefits conferred upon them by socio-economic legislation as also by administrative, social and economic rescue programmes. They must be shown how these rights are often inadequate or inadequately enforced and the social action groups must search with them for the causes of these inadequacies and together they must devise legal and social solutions.

Then another arm of the strategy and by far the most important arm is to encourage the poor to organise and mobilise themselves, to urge them to co-operate with other groups similarly situated and to motivate them to invent and use meta-legal tactics to supplement and strengthen standard legal tactics to change law and society. Stephen Wexler said :

"Poverty will not be stopped by people who are not poor. If poverty is stopped, it will be stopped by poor people. And poor people can stop poverty only if they work at it together."

Measures to fight poverty

The poor and the oppressed must rely on their own efforts and not on lawyers—not even on social action groups to fight poverty and to change their life conditions. Their efforts must be organised to be effective not only because of the strength of members but also because the poor have been alienated from each other as much as from the elite, they are subject to the same temptations and suffer from the same frailties as all men and they have to learn to work together since in the end they will attain development only by that self-liberation that generates social liberation

It is only if the poor are organised effectively that they will be able to overcome the sense of importance—the most serious obstacle to development—that centuries of oppression have instilled in the poor and replace it with a sense of power that will release the creativity and the drive inherent in them as in every man. It will not be enough to adopt measures limited by a commitment to an amelioristic approach to the problems of poverty. This approach has often been structured quite openly as a complement to "trickle down" economic growth policies. Its apparent function has been to ameliorate the problems of the poor to gain time until real growth reached them. But it is common knowledge that the trickle has been insignificant. It has been limited to that which has been able to get through a small crack in the dams of poor, social and economic, dams which have everywhere been deliberately erected to block the flow. It is, therefore, necessary to develop the alternative strategy of organising the poor so that they are able to act on behalf of their own interest individually as well as collectively. The conventional welfare approaches have had the opposite effect of perpetuating and reinforcing the dependency and powerlessness of the poor.

The Legal Services Programme must avoid creating perpetual dependency and helplessness on the part of the poor and to make them instead self-reliant. Self-reliance depends upon knowledge and power. Knowledge comes with education of the rights and benefits and power comes only through organisation. It is, therefore, through organisation that the poor can become powerful and they can fight injustice on their own.

Organising the poor and preparing them for confrontation against unjust practices, unjust rules and unjust institutions and helping them to work for basic institutional changes will help to change them, to make out men out of them. If I may quote the words of Professor James S. Coleman in his book "Race Religion and Social Change";

"Participation in revolutionary action transforms the previously apathetic masses, by giving them a goal and the hope of achieving the goal. The revolutionary action itself and the rewards of success it brings to hard work create men who are no longer bound by traditional customs, inhibited by ascribed authority patterns, and made apathetic by lack of hope. This psychological transformation..... is a necessary prerequisite to social and economic transformation." □

Early settlement of ESI cases

THE EMPLOYEES STATE INSURANCE CORPORATION has been asked to settle all cases of permanent disablement and dependent's benefit within three months. The Corporation has been advised to establish special medical board to clear the cases. At present there are 2134 cases of disablement benefit and 108 cases of dependent's benefit pending for settlement.

The public sector construction companies are likely to be given contracts for construction of hospitals and dispensaries as the existing process takes longer time. For this purpose a committee will be constituted in the Corporation to oversee the construction activities.

The Corporation will undertake an employee's family welfare project with the assistance of United Nations Fund for Population activities in the States of Uttar Pradesh and Madhya Pradesh.

The ESI now provides medical care to 2.8 crore beneficiaries through 472 centres and spends about Rs. 189 crore on various benefits against an income of Rs. 225 crore annually. □

BIS. B 273

Impact of various schemes on village economy

Madhukar Gupta

An important point in the entire process of rural development is the adoption of the "focal point" approach or the growth centre approach. The author emphasizes that this will lead to a gradual urbanization of the rural areas.

EFFORTS AT THE GROWTH and development of different sectors of the economy over successive Plan periods had still left-over 50 per cent of the population below the poverty line at the inception of the Sixth Plan, the vast majority being in the rural areas.

While the number of agricultural labourers had increased from 27 million in 1961 to 47.5 million in 1971 and 55.37 million in 1981, the number of days for which employment was available in a year to rural workers had declined by 10 per cent for men, 7.5 per cent for women and 5 per cent for children between 1964-65 and 1974-75 as shown by the Rural Labour Enquiry Report. Clearly, the agriculture sector was getting over crowded. On the other hand, employment in the household industries sector had not shown a significantly positive growth trend. The National Committee on the Development of Backward Areas (NCDBA) in their report on Village and Cottage Industries has shown that there was actually a decline in participation rates of male workers in this sector between 1961 and 1971. Although there were controversies arising from intercensal definitions, the 1981 census results generally confirm this trend.

It is evident that the number of landless persons in the rural areas is growing, the unorganised sec-

The views expressed here in are that of the author and not of the Planning Commission.

tor has not been able to absorb the growing labour force, and the organised sector, while competing with the former has itself shown a limited capacity to absorb additions to the work force. It would appear that the growth of rural economy has not come up to expectations in terms of its capacity to sustain the population. Now therefore, large-scale wage and self-employment opportunities will have to be created in the rural areas and the base of the rural occupational structure will have to be diversified.

Review of ongoing programmes

Through a number of Special Programmes, efforts are currently being made, on a country-wide basis, to increase the income levels of the poor and reduce unemployment/underemployment over a widened occupational base.

These are : (a) The Integrated Rural Development Programme (IRDP) including the National Scheme for Training of Rural Youth for Self-employment (TRYSEM), (b) the National Rural Employment Programme (NREP)/Rural Landless Employment Guarantee Programme (RLEGP), and (c) the Cottage and Village Industries Programme of the KVIC. These Programmes are briefly reviewed here.

Integrated Rural Development Programme

The progress under the IRDP would show that the physical target of covering 15 million households in the Sixth Plan, is likely to be achieved. But the Programme as implemented so far has brought out some important limitations, both in qualitative terms and in terms of its impact on the rural economy as a whole.

There has been overwhelming concentration in the sphere of milch cattle, and reviews of the programme reveal a somewhat unsuccessful search for new types of innovative schemes. Now, with con-

serious discouragement in the Animal Husbandry sector and, the launching of the Massive Programme for Assistance to Small and Marginal farmers in 1983-84 (which effectively takes away the other major primary sector activities, such as minor irrigation, etc. from the scope of the IRDP), the situation in regard to selection of schemes has become still more difficult.

It is stipulated under the IRDP that 33 per cent of the beneficiaries should be assisted in the secondary and tertiary sectors. This is the Industries Services Business (ISB) component of the Programme. In the last two years, there has been a marked improvement in the coverage under this segment of the Programme, but there are still some major areas of concern. Preliminary observations of the Programme Evaluation Organisation of the Planning Commission, indicate that Progress in the Secondary Sector was nominal and in the Tertiary Sector, concentration had been mainly on small business—small shops, etc.—and some services such as rikshawpulling, bullock carts, etc.

The performance under TRYSEM which is expected to provide productive and entrepreneurial skills to 40 youths per block per annum, largely under the ISB component of the IRDP, shows while the quantitative targets for training have been achieved, only 50 per cent of those trained have been able to get settled in any avocation. The tradewise break-up is not available, thus making it difficult to assess the real impact of the programme. A tendency to concentrate on a few activities like tailoring and knitting, and on services based on new skills such as electric wiring, welding, fitting, etc. has, however, been observed. Activities based on traditional skills have not always found a significant place in the Programme. In fact the KVIC which was to take up 50 beneficiaries per annum in each of the 5092 blocks under this programme, is now expected to cover only 500 blocks in the whole country in the Sixth Plan period. As for the services, there are no demonstrable linkages between the number of persons trained and the area requirements and absorption capacity. This is evidently due to the fact that the existing training institutions such as ITI's, Polytechnics, etc., generally provide for a limited number of activities with an eye on feeding the larger urban and industrial centres and, are not equipped for activities germane to the local environment and skill base on a significant scale.

Within this overall scenario, the IRDP, *prima facie* suffers from a grossly deficient average per capita investment which was Rs. 3201 in 1983-84 (Rs. 2500 till 1982-83). With the average per capita income level of the Poverty Group at Rs. 46 per month (this would be lower in the case of the poorer among the poor), even with an optimistic ICOR of 2, this level of investment will not suffice to carry the beneficiaries above the Poverty Line, except those who may already be near it by virtue of their existing land or asset base (and therefore would, perhaps, not figure significantly in unemployment estimations).

This deficiency is compounded due to the absence of the required backward and forward linkages, which has adverse effects on potential of the assets endowed.

Because of these limitations coupled with some of the known malpractices such as "benami" transactions, as noticed in the case of livestock in particular, the IRDP though conceptually sound, would in its present form appear to have a relatively limited impact by way of net additional asset creation, value addition and overall increase in productivity of the rural economy. The current attitude of the sectoral departments towards the anti poverty programmes as something distinct from production programmes, would have to undergo a conscious change in this context.

NREP and RLEGP

The National Rural Employment Programme (NREP) and the Rural Landless Employment Guarantee Programme (RLEGP) essentially aim to provide supplementary wage employment opportunities to those who are presently unemployed or underemployed. In the long run such programmes can be viewed basically as the means for providing grants for sustenance unless, they can, through the creation and development of economic and productive infrastructure, augment long term employment opportunities, both in agriculture and the non-agricultural sectors and, meanwhile, provide a minimum reasonable period of employment to the most needy i.e., the landless and assetless, together with accompanying asset endowment under Programmes like the IRDP. For the former, as of now, no projections are available and the tendency to spread the works, wide and thin, is going to affect this aspect of the programme adversely. The latter is not assured in the current programme guidelines except of a limited extent under the RLEGP, and in any case there is no convergence in determining the beneficiary clientele under the IRDP and the NREP/RLEGP. Significantly there is no provision for maintaining a roster or other record of the persons to whom employment is actually being provided, and the total mandays of employment generated in a year continues to be the only criteria, though evidently insufficient, for measuring the impact. In the meanwhile, these programmes hold a significant inflationary potential unless accompanied by adequate availability of essential commodities and other wage goods in the rural areas. It may be mentioned here that although the RLEGP Guidelines provide for part payment of wages in foodgrains, which would certainly counter the inflationary potential many State Governments are averse to supply of foodgrains.

Cottage and village industries

In sectoral terms the traditional village vocations and other Cottage and Village Industries are almost an exclusive responsibility of the Khadi and Village Industries Commission (KVIC). A few specific commodities relating to this sector, like handlooms, handicrafts, silk and coir, either because of their distinctive product qualities, or area spread, are also being looked after by commodities bodies like

the All India Boards for Handicrafts, Handlooms, Silk and Coir. The KVIC has within its fold only 25 industries, apart from Khadi. The development of these in absolute terms has been impressive with production increasing from Rs. 2.78 crores in 1953-54 to Rs. 764.73 crores in 1982-83 and employment going up from 6.84 lakh in 1953-54 to 34.34 lakh in 1982-83. However, in global terms, the KVIC has a relatively limited coverage both in terms of the number and the nature of industries covered, and the area coverage which is largely concentrated in five or six States.

The role of KVIC and the State Governments even in the areas where KVIC has a dominant presence, needs to be reviewed, so as to allow States to function more directly in this sector.

Within the industries covered by the KVIC there is an overwhelming stress on Khadi, which covers about 40 per cent of the total employment under the KVIC programmes. The total employment in turn covers only a part of the total artisan class and others engaged in traditional vocations. 70 per cent of the total number of 70 lakh traditional artisans are yet to be brought into the fold of the KVIC (so far about 18 lakh families from this class have been covered, the remaining 16 lakhs being new entrants). While it goes to the credit of KVIC that almost 50 per cent of the employment created by it has gone to new entrants, the total picture does show the relatively limited impact of the premier body engaged in the field of Cottage and Village Industries, both in terms of creating additional employment opportunities for new entrants into the work force and to support effectively the traditional artisans class.

Essentially, the approach of the KVIC is also household oriented. However, as the NCDDB has significantly observed, the impact on household and per capita incomes has been very limited. It may be mentioned here that the figures of employment include both full time and part-time employment.

Policy support

In order to make the household approach self sustaining and self generative, on the one hand, and to create an impact on the overall economy of the villages and the rural areas, on the other, a policy aimed at integrated development of the rural economy would be necessary. Agriculture and Allied Sectors would, for obvious reasons, continue to play the primary role in the process. Apart from the normal sectoral programmes, several special measures have already been taken in this sector viz. the Drought Prone Areas Programme, the Desert Development Programme, the Massive Programme for Assistance to Small and Marginal Farmers, the Training and Visit Scheme, etc.

The area where a major policy thrust is evidently lacking, and would now be required, is in respect of Rural Industrialisation and development of a robust tertiary sector in the rural areas. We still do not have anything in the nature of a concept of Rural Industrialisation. There is a crying need now to develop a

concept and policy for "Rural Industrialisation". Any such policy would have four major components.

Household based industry (this would be particularly relevant for traditional crafts), the objective of which would not only be to augment family and household incomes, but equally to increase production and create more employment in the global sense, where the individual units could be conceived either in terms of a complete production cycle or as an identifiable component of a larger production cycle.

Industries based on agriculture and allied activities with the threefold objective of : (a) providing support to the primary producer for optimising his returns; (b) value addition in the rural areas, thereby also adding to household incomes; and (c) provision of additional employment opportunities in the rural areas with its inevitable impact on relative rural and urban/industrial wages.

Industries intended to (a) produce wage/consumer goods; (b) secondary goods and services for local activities such as tools, equipment, small machinery, fertilizer and feed mixes, agro-service complexes, etc. and (c) local need-cum-resource based industries including even some basic goods such as cement (mini and alternate technology based), tiles, bricks and related secondary products like hume pipes, etc.; and most important, the planned provision of productive and supportive infrastructure, and institutional support particularly in the sphere of input/raw materials supply, marketing, credit and technology.

Within the above framework, some activities and industries would now have to be indentified for the provision of macro-level policy support providing inter-alia, for their development primarily in the village sector and the rural areas, determining the scale of operations and appropriate production cycles for each group, product reservation and purchase reference, supply of quality raw materials and, choice of appropriate technologies geared to an optimal mix of productivity and maximisation of the employment potential. Based on the availability of traditional skills and emerging new potentials, the NCDDB has identified some industries for concentrated attention in the first phase. These include food and tobacco products, edible and non-edible oils; beverages; textiles (khadi, cotton, handlooms and manufacture of garments); leather and footwear; major carpentry sectors; ferrous and non-ferrous metals; major items for production under non-metallic mineral products: sericulture and tassar culture; and, carpet making and woollen garments. In addition, a major thrust on agro-processing and agro-industrial activity would now be necessary. Sectoral studies in these areas could lead to comprehensive policy packages. Within such a wider policy support there are some major constraints that will need to be removed.

Institutional support and linkages

A major bottleneck lies in the inadequacy of infrastructural support, primarily in respect of raw material supply marketing. Apart from the provisioning aspect for raw materials, this would essentially involve institution building. The NCDDB

has dealt with possible institutional mechanism at length, but nothing concrete has emerged so far in terms of integrated linkages planning.

At present, apart from the KVIC, the limitations of which have been touched upon earlier, there are some corporations in some States for specific commodities such as, Handlooms, Leather, Brassware, Sericulture, etc. However, actual experience shows that many of these have a very limited coverage both in terms of area and persons, even in respect of the commodity of specialisation.

With a view to providing a wider multi-product and multi-functional arrangement in respect of village and small industries, District Industries Centres (DICs) had been set up in 1977. In practice, experience of the DICs has, however, been limited and they have tended to operate over the general industrial scene, with no significant direction towards providing the required mix of services specifically to the village sector.

In 1979, a separate pilot scheme was also approved for the setting up of Rural Marketing and Service Centres at the Block level. However, this was taken up only by the All India Handicrafts Board. Out of 224 Centres sanctioned, 164 have been set up and out of the 84 Centres evaluated only 43 are said to be functioning satisfactorily. The coverage is evidently miniscule.

The NCDBA has recommended the establishment of District Supply and Marketing Societies (DSMS) to be run on a commercially viable basis, for arranging raw material/input supplies and marketing of the products of artisans. In this system, at the sub-district level, there can be Group Production Centres and linkages with LAMPS type of bodies to act as branches of the DSMS, and at the State level there could be a body on the pattern of the Gujarat Rural Industrial Marketing Corporation, in addition to the specific commodity bodies that may be existing. Rural Marketing Centres could be reoriented to make them act as multi-commodity display centres, particularly in the urban areas, and, perhaps even be supplemented by regulated private retail channels.

All these possibilities would be subject to the diversity of circumstances in different States. It would be appropriate that a broad pattern of institutional arrangements on the above lines is suggested to the States, and they are encouraged to formulate well conceived and integrated "Linkages Plans". A Special Central Scheme could be conceived in the Seventh Plan for helping to ground such integrated institutional mechanism. It would of course, have to be stressed that the States would ultimately have to shoulder the responsibility squarely in spite of the existence of such bodies as the KVIC and the other All India Institutions.

Training

Training and upgradation of skills is another major area of concern. Under the TRYSEM, there is

a Central scheme for strengthening or training infrastructure in the States. A provision of Rs. 5 crores had been made for this scheme in the Sixth Plan, so far Rs. 4.10 crores upto 1983-84 have been spent against which Rs. 1.82 is expenditure on Central Institutions. The experience of the scheme and the results of evaluation of TRYSEM both point to the fact that, there has not been any substantial progress in developing training infrastructure and training syllabi in a planned manner. The limitations of the existing IIs and Polytechnics have been mentioned earlier. The KVIC and some of the commodity bodies have their own training schemes, but the coverage of KVIC has been extremely limited. The figures show a sharply declining coverage. In 1980-81 and 1981-82, the number of persons trained by KVIC was 3608 and 1731 respectively as against 1.2 lakh and 2.02 lakh persons trained under TRYSEM in these two years.

It is time that the idea of having a Composite Rural Training Centre (CRTC) in each district, is now operationalised. A scheme of the Education Ministry has been under implementation since 1978-79 under which selected Polytechnics are to be developed as Community Polytechnics for undertaking activities like manpower development and training, transfer of technology, provision of technical services, socio-economic survey and planning, provision of support services through the organisation of Youth Groups, balwadis etc., and dissemination of information for rural development along scientific lines. In its present form the scheme appears to be too wide and holistic in its approach, and very limited in terms of coverage, with no demonstrable linkages with the other rural development institutions at the district level, as is also evident from the evaluation of the scheme by the PEO (1983). However, the basic idea behind it is sound. It may be worthwhile to reorient the scheme and convert, in the first instance, one selected ITI/Polytechnic in each district into a District Composite Rural Training Centre, functioning as a part of the rural development machinery. Each such centre could have a separate wing for training in the primary, secondary and tertiary sectors, and a Centre for Planning, Project Management and Technology. The Centre would require to have close linkages with other organisations like the District Rural Development Agency (DRDA), the DIC, KVIC, other commodity bodies and technical institutions, and help in the conduct of regular exercises for identification of investment opportunities and updating training programmes according to the state of the market and technology. It would also provide services relating to quality control, product design, etc. Mobile training units, and linkages with group centres at the field level, could be built into the system.

Technology

Another major issue in the whole system relates to improved technology. The flight of artisans from their traditional pursuits can, among other things, be attributed to outmoded processes involving considerable drudgery without adequate returns. The NCDBA has

criticised the tendency to stick to the traditional labour intensive technology involving drudgery, low productivity and low added value. The example of leather has been given, where the cobbler spends much time in the splitting and buffing of leather, which in spite of the most skilful cutting, does not result in uniform product quality. It has been suggested that while the initial processing should be done mechanically at a suitable level of operation, the cobbler should be provided quality raw material and greater competence in the form of new product designs, cutting skills, etc.

In pursuance of the objective of the New 20-Point Programme, which emphasizes the need for updating the technology in rural industries, the KVIC organised a Saranjam Sammelan in March 1983 in which improved equipments designed by various agencies were demonstrated. The KVIC accepted most of the recommended technologies. A Directorate of Instrumentation has also been set up for arranging supply of standardised equipment. The number of units supplying improved equipments has increased from 400 in 1979-80 to 1000 in 1981-82. An appropriate Technology Unit is also functioning in the Ministry of Industries, which has sponsored a number of studies and projects in respect of some rural industries/crafts such as blue potteries (Jaipur, Rajasthan), lock manufacturing (Aligarh, UP) lacquerware (Chennapatna, Karnataka), etc.

But the total impact, particularly in respect of dissemination of technology, has been relatively limited.

It also needs to be taken note of that merely making improvements in the existing process of production from the technology point of view would not be enough. Efforts in this direction would have to be accompanied by changes in the form of Comprehensive Common Production Programmes for selected activities. This would require a multifaceted action approach involving identification of technologies developed, development of new technologies, dissemination and promotion of actual use of technologies at appropriate and optimal levels in the total production cycle and, planned manufacture and provision of improved tools and machinery.

A Council for the Advancement of Rural Technology (CART) has been set up in the Sixth Plan under the Ministry of Rural Development, which has started functioning recently. It would take some time for this institution to start functioning along the above lines and to build up a system of institutional linkages running down to the State and District level on the one hand, and with technical institutions and manufacturing bodies, on the other.

Energy

The availability of energy in the rural areas both for productive purposes and social consumption has also acted as a major constraint in the all-round development of the village economy and qualitative improvement in the level of living. Although rural

electrification is included in the Minimum Needs Programme, it has effectively been limited to energisation of pump sets and tubewells, and non-availability of power can be said to be a major bottle-neck in the growth of rural industries.

As a result of the emphasis given in the Sixth Plan some headway has been made on the energy scene which had so far been dominated by non-commercial sources of energy, like firewood, agricultural wastes and cowdung which constitute nearly 44 per cent of the total energy consumed in the country. A number of schemes have been started by the Department of New Energy Sources and an Integrated Energy Project is under implementation through the Planning Commission.

However, a considerable amount of research and development work is still needed to improve the designs and lower the costs of new energy sources to bring them within the reach of the rural people. In addition, decentralised block level energy planning on the basis of optimum mixes of alternate uses and energy sources on a fairly large scale would be necessary for which the existing Integrated Project may have to be expanded both in terms of geographical coverage and by extending its scope beyond what now appears largely to be an attempt to demonstrate new energy sources. All this would have to be accompanied by decentralised production of the hardware connected with new energy sources, wherever feasible in techno-economic terms e.g. manufacture of solar cookers, improved chulhas (in fact the latter could usefully be made a compulsory component of each house-hold project under the IRDP), construction and maintenance of bio-gas plants (maintenance is currently a major problem in this scheme), low cost latrines, etc.

Tertiary sector

For balanced development and self-generative growth of the rural and village economy, the growth of the primary and secondary sectors would have to be accompanied by a robust tertiary sector, both from the point of view of meeting the increased demand for goods and services, and widening the base of the occupational structure. In the developed countries nearly 40-50 per cent of the people earn their livelihood from this sector, whereas in our country less than 20 per cent of the population is engaged in it.

Unfortunately little attention has been paid so far to the development of the tertiary sector in a planned manner. There is no department in the States which has exclusive responsibility for the promotion of this sector. The first need is to create such nodal points immediately, for instance there could be a Department of Internal Trade and Services in the Central and State Governments.

Services can be broadly classified as commercial (haircutting, tailoring, retail trade, confectionary and catering, repair workshops, welding, wiring, masonry, automechanics, etc.) and social (paramedical and health services, sanitation, maintenance of assets created by Government, etc.).

The former could take the form of self-employment ventures and planned wage employment in larger ventures and complexes. The latter is, in fact, the only way of making the policies of industrial dispersal really meaningful in terms of the development of the rural areas. As for the self-employment ventures, they could be planned on the basis of quick surveys of existing facilities and common sense norms of population coverage per unit. Many of these ventures involve small investment and relatively low levels of skills and have immense potential for development.

The social services have so far remained in the exclusive domain of formal government employment. For reasons stemming from this, such as unwillingness to work in the rural areas, financial constraints, etc., the existing availability of services in the rural areas cannot be called adequate both in quantitative and qualitative terms e.g. a large number of posts of ANMs in the rural areas are lying vacant. The provision of "bare foot doctors" and "Dais" working on an honorarium basis after being trained locally and provided with appropriate kits, would not

only be desirable, but would also fit in with the rural milieu. There could be other examples like persons trained to construct and maintain facilities like hand-pumps, trained soil testers allowed the use of common facilities, quality testers in market yards, persons trained to construct and maintain low cost latrines, etc.

The need of the hour is that State Governments draw up comprehensive plans for the development of the tertiary sector involving quick survey of the demand of various services and arrangement for matching supplies.

An important element in the entire process of rural development is the adoption of what the NCDBA has called the "focal point" approach or the growth centre approach. This will facilitate better planning, more optimal use of resources, setting up of agro-industrial services complexes in a planned manner and, most importantly, will lead to a gradual urbanisation of the rural areas as opposed to the present tendency of migration from the villages. This therefore, needs to be adopted as an integral part of the planning process. □□

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10

Some aspect of the Indian economy

Achievements of planning : Retrospect and prospects

PLANNING IN INDIA derives its objectives and social premises from the Directive Principles of State Policy set forth in the Constitution. The public and private sectors of the economy are viewed as complementary. The private sector covers not only organised industry but also small-scale industries, agriculture, trade and a great deal of activity in housing and construction and other fields. Individual effort and private initiative are considered both necessary and desirable, the policy being to assist development on the basis of voluntary cooperation to the utmost extent. Economic planning also envisages a growing public sector with massive investments in basic and heavy industries.

The First Five-Year Plan (1951-52 to 1955-56) had a two-fold objective to correct the disequilibrium in the economy caused by the Second World War and partition of the country and to initiate simultaneously a process of all-round balanced development, which would ensure a rising national income and a steady improvement in the living standards over a period of time. Since the country had to import foodgrains on a large scale and there were inflationary pressures in the economy, the Plan recorded the highest priority to agriculture.

In 1954, Parliament declared that the basic objective of economic policy should be to achieve a 'socialistic pattern of society' under which the basic criteria for determining the lines of advance would be social gain and greater equality in income and wealth and not private profit. Therefore, the Second Five-Year Plan (1956-57 to 1960-61) sought to promote a pattern of development which would ultimately lead to the establishment of a socialistic pattern of society in India. In particular it stressed that the benefits of economic development should accrue more to the less privileged sections of society and there should be a progressive reduction in the

concentration of income, wealth and economic power.

The Third Five-Year Plan (1961-62 to 1965-66) aimed at securing a marked advance towards self-sustaining growth. The Plan aimed at an increase of 30 per cent in the national income and 17 per cent in the per capital income during the period.

The Fourth Plan (1969-70 to 1973-74) aimed at accelerating the tempo of development in conditions of stability and at reducing fluctuations in agricultural production as well as the impact of uncertainties of foreign aid. It aimed at raising the standard of living of the people through programmes which at the same time were designed to promote equality and social justice. Efforts were also directed towards reduction of concentration and a wider diffusion of wealth, income and economic power.

The Fifth Plan (1974-75 to 1977-78) was formulated at a time when the economy was facing severe inflationary pressures. The major objectives of the Plan were to achieve self-reliance and to adopt measures for raising the consumption standards of the people living below the poverty line. The Plan also gave high priority to bringing inflation under control and to achieving stability in the economic situation. It aimed at an annual growth rate of 5.5 per cent in national income.

The Sixth Plan (1980-81 to 1984-85) has been formulated after taking into account the achievements and shortcomings of the past three decades of planning. Removal of poverty is the foremost objective of the Plan even though it is recognised that a task of this magnitude cannot be accomplished in a short period of five years. Among other things, the strategy adopted for this Plan consists essentially in moving simultaneously towards the infrastructure for both agriculture and industry so as to create conditions for an accelerated growth in investment, output and exports and provide, through special programmes designed for the purpose, increased

*Facts and figures quoted in this chapter are based on India 1982, Research and Reference Division, Publication Division Government of India, New Delhi.

opportunities for employment especially in the rural areas and the unorganised sector and meet the minimum basic needs of the people. This Plan envisages a total public sector Plan outlays of Rs. 97,500 crores and aims at a growth rate of 5.2 per cent per annum in gross domestic product and 3.3 per cent per annum in per capita income.

The revised 20-Point Programme, announced by the Prime Minister on 14 January 1982, reinforces the principal guiding factors in the formulation of the Sixth Plan. The programme focusses attention on some of the most important social and economic programmes included in the Sixth Plan and seeks to impart greater dynamism to these. While the thrust of the revised programme continues to be on providing better living conditions for the less privileged sections of the population, it also aims at all-round improvement in productivity. The importance given to the programme can be gauged from the outlays earmarked for the Revised 20-Point Programme in the current Sixth Plan, as shown in Table 1.

Table 1 Outlays for the Revised 20-Point Programme
(Rs. crores)

S. No.	Item	Sixth Plan outlay
1		3
1.	Irrigation and dry land agriculture	10,266.68
2.	Production of pulses and oilseeds	82.11
3.	Integrated rural development and national rural employment	34,86.64
4.	Land reforms	304.63
5.	Minimum wages for agricultural labour	2.53
6.	Rehabilitation of bonded labour	31.68
7.	Accelerated programme for development of scheduled castes and tribes	1,310.00
8.	Supply of drinking water to problem villages	2,007.11
9.	Rural house-site-cum-house construction	353.50
10.	Environmental improvement of slums	151.45
11.	Power	19,265.44
12.	Afforestation, social and farm forestry and development of bio-gas	150.00

1	2	3
13.	Family planning	10,10.00
14.	Universal primary health care, etc.	506.72
15.	Accelerated programme for women and child welfare	220.18
16.	Elementary education for age group 6—14 and removal of adult illiteracy	1,033.00
17.	Public distribution system	4.00
18.	Village and small industries	1,780.45
Total :		42,768.00

The physical targets corresponding to the outlays for the Revised 20-Point Programme and the achievements made during 1981-82 and the targets set for 1982-83 are listed in Table 2.

What briefly are the achievements in terms of physical targets of the Sixth Five-Year Plans so far ?

The agricultural sector contributes nearly one-half of the national income, provides livelihood to about three-fourths of the population, supplies the bulk of wage goods required by the non-agricultural sector and raw materials for a large section of industry, besides providing a substantial portion of the country's exports. The increase in the irrigated areas, consumption of fertilisers and total production of foodgrains have been discussed already. The growth of other aspects of this sector merits attention here.

Table 3 shows the area under major crops and the production of foodgrains and other principal crops over the period 1950-51 to 1980-81.

Table 4 gives the development of cumulative irrigation potential during various plans and its utilisation.

Table 5 gives the total community assets created under the Food for Work Programme/National Rural Employment Programme from 1977-78 to 1980-81.

Table 2—Physical targets and achievements of the Revised 20-Point Programme

Item	Unit	Prior to Sixth Plan	Sixth Plan targets	Achievements during 1981-82	Targets for 1982-83
(1)	(2)	(3)	(4)	(5)	(6)
Increase in irrigation potential	Million hectares	56.6	13.74	2.74	2.38
Pulses production	Million tonnes	12.8	14.50	11.40	14.87
Oilseeds production	Million tonnes	10.2	13.00	11.50	13.51
IRDP-families to be benefited	Millions	2.8	15.00	2.41	3.00
NREP-Man-days employment	Millions	989.2	300-400 per year	2,67.1	331.10
Surplus land assumed for allotment	Lakh acres	6.79	52.48	7.31	11.33
Bonded labour to be rehabilitated	Numbers	122,000	32,300	22,314	32,574
Families to be economically assisted :					
(i) Scheduled Castes	Lakhs			12.06	19.85
(ii) Scheduled Tribes	Lakhs			—	9.47
Problem villages to be covered	Thousands	95	231	27.7	35.3

1	2	3	4	5	6
House-sites to be allotted	Lakh families	77	68	11.28	11.32
Construction assistance to be provided	Lakh families	55.66	139	5.41	7.47
Slum population to be covered	Lakhs	68	310.7	14.56	19.81
Economically weaker section houses to be provided	Lakhs		16.2	0.60	1.79
			3.0		
Rural electrification :			(HUDCO)		
(i) villages to be electrified	Numbers	249,799	100,00	24,669	25,512
(ii) pumpsets to be energised	Thousands	4,000	2,500	326.4	423
Trees to be planted	Crores	—	—	125.7	186
Bio-gas plants to be set up	Numbers	75,000	400,000	23,086	75,000
Sterilisations to be done	Lakhs	313.7	240	29.7	44.6
PHCs to be established	Numbers	5,400	600	171	209
Sub-centres to be set-up	Numbers	50,000	40,000	8,319	7,931
Integrated Child Development Scheme blocks to be opened	Numbers	150	1,000	115	320
Enrolment in age group 6—14	Crores	9.3	7	1.14	0.40
Adult literacy	Lakhs	900	7	29.18	55.85
		(all people in age 15—35)			
Fair price shops	Lakhs	2.98	0.52	N.A	0.52

Table 3—Area under and production of principal crops

Item	1950-51	1960-61	1970-71	1978-79	1979-80	1980-81
Area under principal crops ('000ha)						
1. Total foodgrains	97,321	115,581	124,316	129,010	125,206	125,790
2. Sugarcane	1,707	2,415	2,615	3,087	2,610	2,648
3. Groundnut	4,494	6,443	7,326	7,433	7,164	6,904
4. Sesame	2,204	2,169	2,433	2,389	2,377	2,442
5. Mustard, etc.	2,071	2,883	3,323	3,543	3,470	4,063
6. Cotton	5,882	7,610	7,605	8,119	8,137	7,871
7. Jute	571	629	749	884	834	942
Production of principal crops ('000 tonnes)						
1. Total foodgrains	55,011	82,326	108,422	131,900	109,700	129,867
2. Sugarcane	70,490	14,080	26,368	15,734	128,833	150,522
3. Groundnut	3,319	4,698	6,111	6,208	5,768	5,019
4. Sesamum	422	320	562	1,514	347	437
5. Mustard, etc.	768	1,347	1,976	1,860	1,428	2,247
6. Cotton ('000 bales)	3,039	5,550	4,763	7,957	7,671	600
7. Jute ('000 bales)	3,497	4,136	4,938	6,470	6,071	6,515

Table 4—Development of cumulative irrigation potential and its utilisation

(Lakh ha)								
Major and medium projects	Pre-Plan	First Plan (1951-56)	Second Plan (1956-61)	Third plan (1961-65)	Fourth Plan (1969-74)	Fifth Plan (1974-78)	1980-81	Proposed for Sixth Plan (1980-85)
1	2	3	4	5	6	7	8	9
Potential	97	122	143	165	207	247	275	326
Utilisation	97	110	129	152	187	212	232	284

Table 5—Community assets created under FWP/NREP

Community assets created	Area covered under soil conservation (ha)	Area brought under irrigation through major irrigation (ha)	Area made cultivable through flood protection (ha)	Area covered under plantation (ha)	School buildings constructed/ repaired (numbers)	Panchayat ghars/ community halls constructed (numbers)	Road work		Construction of intermediate/ main drains/ field channels and land levelling, etc., in irrigation command areas (numbers)	Other works
							Main-tained, improved/ repaired (numbers)	New roads constructed (numbers)		
Total :	8,311,699	1,270,288	492,258	474,151	114,160	5,642	478,893	228,377	215,916	379,221

Power

The growth of installed generating capacity in million kilowatts in India is as follows :

1951	1956	1961	1966	1969	1974	1979	1982
2.3	3.4	5.6	10.2	14.3	18.5	29.3	35.5

The expected addition to the total energy from various sources during the Sixth Plan, viz., 1980—85, is 19.66 million kilowatts.

Coal

After Independence, coal mining was stepped up, and production has risen from 32 million tonnes in 1950 to well over 120 million tonnes.

Oil

A production of 20.95 million tonnes of oil, both from offshore and on-shore oilfields, was anticipated during the year 1982-83. In the wake of recurring heavy outflow of precious foreign exchange for the import of oil, an accelerated effort is on to drastically raise indigenous production in the shortest time possible, as Table 6 shows.

Table 6—Production of oil

Source of production	(Million tonnes)		
	1980-81	1981-82	1982-83 (anticipated)
On-shore	5.52	8.22	8.84
Off-shore	4.98	7.97	12.11
Total :	10.50	16.19	20.95

Industry

During the three decades of planned development, industrial production has made rapid strides both in terms of variety and quality. The production increased at an average growth rate of about 5 per cent per annum during the period 1980-81, and the growth has been particularly marked in areas such as petro-

leum products, chemicals and chemical products, metal products, electronics, electrical machinery, transport equipment and power generation. The share of the manufacturing sector in the net domestic product increased from 13.9 per cent in 1960-61 to 15.4 per cent in 1980-81.

An important feature of industrial growth in the country after Independence has been the rapid expansion of the public sector. In 1951, there were only five non-departmental public undertakings with an investment of Rs. 29 crores. On 1 April 1981, they numbered 185 with an investment of Rs. 21,126 crores and nearly Rs. 25,000 crores at the beginning of 1982-83. These enterprises produce diverse products such as steel, coal, aluminium, copper, heavy and light engineering products, fertilisers, basic chemicals, drugs, minerals, petroleum products, locomotives, aircraft and ships. Their turnover in 1980-81 was Rs. 28,645 crores and the number of their employees was 18.38 lakhs.

Following Parliament's acceptance in 1954 of a socialistic pattern of society as the national objective, the industrial policy was revised in 1956. Under the revised policy, industries were specified in two schedules. Industries specified in Schedule A, such as arms and ammunition, defence equipment, atomic energy, iron and steel, mineral oil, aircraft, air transport, railway transport, ship-building, telephones, electricity, etc., are the exclusive responsibility of the state, while industries specified, in Schedule B, such as ferroalloy and tool steel, basic and intermediate products required by chemical industries, such as the manufacture of drugs, dyestuff and plastics, antibiotics, fertiliser, synthetic rubber, chemical pulp, road and sea transport, etc., are to be progressively state-owned, but private enterprise is expected to supple-

ment the efforts of the state in these fields. Future development of industries falling outside the two schedules would, in general, be left to private enterprise. Notwithstanding this demarcation, it is always open to the state to undertake any type of industrial production.

Cement

The production of cement which was merely 2.9 million tonnes in 1950-51 had risen to 21 million tonnes in 1981-82.

Steel

The production of saleable steel from the integrated steel plants during 1979-80, 1980-81 and 1981-82 was 6.0, 6.28 and 7.27 million tonnes, respectively.

Mineral production

The value of mineral production (excluding atomic minerals) increased considerably during the last two decades, from Rs. 165.1 crores in 1960 to Rs. 3,540.2 crores in 1981. The quantity index of mineral production (based 1970=100) rose from 129 in 1975 to 171 in 1981.

Foreign trade

The value of imports and exports, the total value of foreign trade and the balance of trade for selected years since 1950-51 are given in Table 7.

Table 7—India's foreign trade

Year	(Rs. in crores)			
	Imports	Exports (including re-exports)	Total value of foreign trade	Balance of trade
1	3			
1950-51	650 21	600 64	1,250 85	49 57
1960-61	1,139 69	660 22	1,799 91	-479 47
1970-71	1,614 20	1,535 16	3,169 36	-99 04
1973-74	2,955 37	2,523 40	5,478 77	-431 97
1974-75	4,518 78	3,328 83	7,847 61	-1,189 95
1975-76	5,265 20	4,042 25	9,307 45	-1,222 75
1976-77	5,073 79	5,142 25	10,216 04	+68 46
1977-78	6,025 29	5,404 26	11,429 55	-621 0
1978-79	6,814 30	5,726 26	12,540 56	-1,088 04
1979-80	9,021 75	6,458 76	15,480 51	-2,562 99
1980-81	12,523 91	6,710 71	19,234 62	-5,813 20
1981-82	13,560 12	7,781 40	21,341 52	-5,778 72

With the impressive industrial development since Independence, India's foreign trade has undergone a complete change. Before Independence, the bulk of her foreign trade was confined to Britain and other Commonwealth countries and while exports were based on a few primary commodities, imports were restricted and consisted mainly of manufactured articles. Though, on the surface, there was a favourable balance of trade, it concealed a low level of industrial production and economic development. India's present exports cover a wide range of items of agricultural and industrial sectors as also of handicrafts, handloom, cottage and craft articles; project exports

which include consultancy, civil construction and turn-key contracts have also made a significant progress in recent years.

Efforts have been made in recent years to reorient export strategy with a view to reducing the social costs of exports and to encourage exports of those projects in which we have a long-term comparative advantage and dynamic expansion possibilities.

Transport

There has been phenomenal growth in the transport sector, viz., the railways, road transport, shipping, inland transport, civil aviation and allied activities like tourism. The route length, running track, passengers originating and goods originating in the Indian Railways during 1950-51 and 1980-81 are given in Table 8.

Table 8—Growth in Indian Railways

Year	Route length (km)	Running track (km.)	Passengers originating (laks)	Goods originating (lakh tonnes)
1950-51	53,596	59,315	12,840	930
1980-81	61,240	75,860	36,125	2,270

The total length of roads in India at the end of 1979-80 was 540,720 km. comprising 420,165 km. surfaced roads and the remaining 120,555 km. un-

surfaced roads. The total number of motor vehicles on the roads as on 31 March 1980 was 41.06 lakhs, which includes 2.54 lakh buses including three-wheeler passenger vehicles, and 3.60 lakh tractors.

India has about 5,200 km. of major rivers, which are navigable by mechanised craft, but only 1,700 km. are actually utilised. As regards canals, the available length is 4,300 km. but only a length of 485 km. is suitable for mechanised craft, of which only 331 km. are being actually utilised.

India has the largest merchant shipping fleet among the developing countries and ranks fifteenth in the

world in shipping tonnage. The country's operation tonnage has risen from 1.92 lakh GRT (gross registered tonnage) at the time of Independence to 58.59 lakh GRT as on 31 March 1981. India has four major ship-building yards and all these are in the public sector. India has now 10 major ports and 160 minor ports scattered all along the coastline of about 6,000 km. The overseas traffic handled by the major ports increased from 57 million tonnes in 1974-75 to 80.4 million tonnes in 1980-81.

Miscellaneous

Apart from the foregoing, tremendous progress has been achieved, since the years of planning in India, in fields such as telecommunication, postal service, civil aviation, mass communication, housing and other social security schemes.

GAP BETWEEN TARGETS AND ACHIEVEMENTS

A recent study made by S. K. Tulsi has shown that because of delays and the shortfall in the implementation of plan targets beginning from the First Five-Year Plan onwards, there has been a substantial loss of production as well as generation of higher national growth and per capita income. It says that, on an average, a Five-Year Plan took seven years to be implemented. Table 9 gives in a nutshell the planned increase in output for certain selected sectors over 28 years of national planning, the actual increase, the output gap and the loss of time in years, according to the aforementioned study.

Further, according to the same study, the national income would have been higher by Rs. 120,082 crores if the targets laid down by the Planning Commission had been achieved in time. This would mean that our per capita income would have reached Rs. 3,398 in 1980-81 instead of being only Rs. 1,537.

We shall have to determine whether the non-implementation and non-fulfilment of the Plan targets were due to reasons entirely beyond the control of the people entrusted with planning or whether they were on account of the deficiencies at various levels, both of decision-making and of implementation—deficiencies which were inherent in the system and not accidental. If we find that there are some inherent lacunae in the working of the Plan projects, then we shall have to take a serious note of them and try to correct them.

MID-TERM REVIEW : SIXTH PLAN

The Sixth Plan Mid-Term Review presents an assessment of growth of the economy in a relatively short period, i.e., three years. The economy took an upward swing with the growth of Gross Domestic Product by 7.9 per cent in 1980-81. In 1981-82, the GDP increased by 5.2 per cent. Thus, over the first two years of the Plan, economy grew at the rate of 6.5 per cent in real terms, exceeding the Plan annual growth rate of 5.2 per cent. However, due to bad weather, etc., the growth rate in 1982-83 is estimated to be only 2 per cent.

The domestic rate of inflation was significantly reduced; the movement of wholesale price index fell from the very high rate of nearly 18.20 per cent in 1980-81 to around 2 per cent in 1982-83.

However, the picture regarding prices of imported capital goods is not rosy. The inflation, particularly in the costs of capital goods, has eroded the value of Plan investments. Taking the first four years of the Plan, the total actual or approved plan outlays come to 83 per cent (Rs. 79,880 crores) of the public-sector Plan outlay of Rs. 97,500 crores. But thanks to erosion through inflation, this represents at 1979-80 prices only 62 per cent of the Plan outlay. For 1983-84, it has been decided now (July 1983) to raise the Centre's Annual Plan investment by Rs. 800 crores, directed mostly towards the core sectors.

Table 9—Twenty-eight years of planning (beginning with Second Plan)

Sector		Planned increase in output	Actual increase	Output gap	Loss of time (years)
1		2	3	4	5
Foodgrains	(‘000 tonnes)	121,100	66,900	54,200	10
Cotton	(‘000 tonnes)	1,746	684	1,062	14
Cement	(‘000 tonnes)	28,020	15,020	13,000	10
Finished steel	(‘000 tonnes)	16,100	5,400	10,700	15
Electrical capacity	(‘000 kw)	40,231	25,800	14,431	8
Paper, etc.	(‘000 tonnes)	1,071	800	263	5
Fertilisers (‘000)	(‘000 tonnes)	6,885	2,843	4,042	13
Area irrigated	(‘000 ha)	58,600	27,900	30,700	12
Railway traffic	(‘000 tonnes)	264,000	106,000	158,000	8
Primary students	(percentage in the age group 6—11)	51.8	33.5	18.3	8
Exports	(Rs. crores)	17,217	7,600	9,617	17

The mid-term estimates indicate that the Plan targets will be fulfilled in full or adequate measure in a number of areas, including agriculture and industry.

Prices and money

The behaviour of prices in the first three years of the Sixth Plan was encouraging, showing a declining trend in the rate of inflation. The growth in the wholesale price index, which was as much as 18.2 per cent in 1980-81, came down to 9.3 per cent in 1981-82 and to nearly 2.5 per cent in 1982-83. The rise in the consumer price index during 1982-83 was also less as compared with that in 1981-82. Investment costs have, however, risen comparatively fast due to the sharp rises in the costs of construction inputs like iron and steel, cement, logs and timber, etc.

Monetary policy was used flexibly with a view to controlling inflationary pressures and to meeting the growing needs of production and priority sectors. Aggregate monetary supply (M3) increased by 16.8 per cent in 1980-81, 12.6 per cent in 1981-82 and 14.8 per cent during 1982-83. Monetary policy will continue to be restrained and cautious because of probable inflationary pressures, but the growing requirements of credit for production purposes will also have to be met fully.

Particular attention will have to be given to increasing domestic production and efficient management of supplies in the case of essential commodities. Where necessary, domestic production will have to be supplemented by timely imports. Since the maintenance of adequate stocks of foodgrains with public agencies helps in keeping in check the market expectations of price rises, continued efforts will have to be made to maximise the procurement of foodgrains. The public distribution system will have to be reoriented, strengthened and streamlined in order to make available essential consumer goods to people, particularly the weaker sections, at reasonable prices throughout the country. Besides, hoarding, profiteering and other anti-social activities will have to be effectively curbed by taking stringent action against those indulging in them.

Poverty and employment

The Sixth Plan document assumed a reduction in the percentage of people below the poverty line from 47 per cent to 30 per cent. In absolute terms, the number of persons below the poverty line was expected to come down to 215 million from 316 million. Subsequently, because of the revision in the population estimates, based on the 1981 Census the figures of population, below the poverty line in 1979-80 were revised, and worked out to 51.1 per cent (nearly 339 million people). Over 1980-81 and 1981-82, a large number of families below the poverty line are expected to have crossed it because of the rise of their real income, partly through the adoption of specific poverty alleviation programmes like IRDP and NREP. The exact distribution pattern of expenditure below and above the poverty line will not be known until the results of the National

Sample Survey for the year 1983 become available. Until that time, the number and percentage of people below the poverty line may be estimated on the basis of the assumption that increase in real income is uniform in all the expenditure classes and the number of families brought above the poverty line is relatable directly to the corresponding expenditure in IRDP and NREP. Adopting this method, the percentage of those below the poverty line, it is estimated, came down to 41.5 and their number to 282 million in 1981-82. Thus, over the two years 1980-82, of the people to be taken above the poverty line under the Plan target, 34 per cent were so taken.

The aggregate employment target in terms of 'standard person year' has been placed at 34 million over the Sixth Plan period. This employment is primarily to be generated in agriculture, manufacturing and the service sectors, the last including the two major employment generation programmes, IRDP and NREP. An employment of 4 million standard person years exclusively from these two programmes is expected over the Plan period.

Nearly 12 million standard person years of additional employment were estimated to have been generated over the first two years of the Plan, constituting about 34 per cent of the total employment target of the Plan. This suggests some shortfalls in this area. The major shortfall has occurred in the manufacturing and construction sector, where the growth rate over the Plan period is below the Plan target. In the year 1982-83, a further deceleration in growth is expected, mainly due to a bad harvest. Taking all this into consideration, a significant shortfall in the Plan's employment target in 1982-83 is apprehended. The 1981 Census has shown that the rate of growth of population is higher than assumed in the Sixth Plan document. The pressure on the labour market, as a result, however, will not be felt in the immediate future.

Population control

Under the general heading called 'family planning', a scheme was evolved for family welfare, one of the essential features of which was population control in the form of encouraging a smaller family with, at the most, two to three children per couple. The population of India at the time of Independence was approximately 370 million. It increased at the rate of nearly 2 to 2.5 per cent per annum and within a period of 35 years, it has almost doubled, and most of this growth, according to the famous Malthusian theory, has been in the poorer sections of the population with the result that this has added numbers which did not contribute to addition of productive force in terms of production of wealth and yet meant more mouths to be fed and more persons to be looked after in terms of other facilities, such as health, education, shelter, etc.

As stated earlier, the land under irrigation has not increased in the same proportion and although the production of foodgrains also doubled during this period, it has more or less been neutralised by the population growth. In effect, it meant that the

living standard or per capita availability in terms of foodgrains has remained more or less the same as it was at the dawn of independence.

But this population growth of the poorer section of the society has another more serious implication. In effect, it also means the addition of children who, on account of poverty, suffer from malnutrition from their very childhood, resulting in widespread disabilities and deformities in physical terms in the form of polio, blindness, mental retardation and other ailments. This population of disabled persons becomes an even greater drawback on the whole society. But the more important factor is that a vast mass of added population, which becomes work-worthy physically, is not provided with any productive work. It is this huge segment of population which becomes restive, gets frustrated and agitated, some of which gets drawn to the few large urban centres and is converted into slum and footpath dwellers. The sociological aspect of deprivation of this class in terms of erosion of social and moral values is even more exasperating. Population can be a strength only if it is put to productive use and contributes to the general growth and welfare of the whole society. But from the fact of distortion of distribution of wealth and job opportunities, it is seen that this has not been the case either in India or in most of the developing countries.

According to the Year Book (1981-82) of Family Welfare Programme in India, the percentage of couples in the reproductive age group who have been brought under family planning schemes, including sterilisations, IUD insertions and other methods, increased from 10.6 per cent in 1970-71 to 23.7 per cent in 1981-82. But in terms of numbers, it has increased from 9 million couples to 28 million couples approximately. A recent assessment has shown that by the end of the Sixth Five Year Plan, there would be approximately 44 million unemployed people.

Unfortunately, the need for restricting the growth of population, particularly in the poorer sections, was not felt so actually at the beginning of the planning process in India. This is evident from the fact that in the First Five Year Plan, the amount provided for family planning was a paltry sum of Rs. 1.45 million. In the Second Five-Year Plan, this amount was increased to Rs. 21.6 million and in the Third Plan it was raised to Rs. 248.6 million. This was further increased to Rs. 704.6 million in the three Annual Plans, to Rs. 2.84 billion in the Fourth Plan, to Rs. 4.09 billion in the Fifth Plan and a sum of Rs. 10 billion has been provided in the Sixth Plan.

This author had submitted a paper to the Planning Commission as early as 1954 during the mid-term review of the First Five-Year Plan suggesting the provision of about Rs. 2 to Rs. 3 billion to give direct cash incentives to at least 10 million persons in the reproductive age group to be reached per year. In addition, a scheme of monthly allowance for the first two children and other incentives, such as providing loans for housing, etc., should be in-

corporated in the Plan to tackle the problem of population control on a war footing. Unfortunately this suggestion was considered impracticable and Utopian at that time. It was forgotten that the amount spent at one time to check the birth of one person is much more economical than the amount which the entire society will have to spend on bringing up that person during the entire unproductive period, till the age of 18, and even thereafter when it is not possible to provide any productive occupation to him. Although the realisation of the need to spend substantial amounts on this programme has dawned rather late, it is still the opinion of this author that the amount provided even today is substantially less. The fact that we are able to cover only 23 per cent of the reproductive age group is itself an evidence that the growth rate will still continue to be substantial with the population reaching more than a thousand million by the turn of the century.

It is common knowledge among economists that the best way to bring about reduction in the growth rate of population is to improve the economic standard of living of the people. It has been seen that as people and families develop economically, they themselves realise the advantage of having smaller families. In fact, in most of the highly developed countries, they have now reached practically a negative growth rate in population.

Hence, in the ultimate analysis, if we adopt an imaginative and a dynamic plan, for the economic growth of our entire population, by providing productive work to most of the work-worthy members, it would in itself automatically serve as the best incentive for population control as well as family welfare. The model of the scheme suggested in this thesis is to achieve this objective.

(Next Issue : Planning sectoral analysis agriculture)

Do You Know That

India has a coastline of 6080 kms. and that there are 10 major and 185 minor ports besides innumerable harbours along this coastline.

Our country has a merchant fleet of 300 Ocean going vessels totalling over 60 lakh GRT.

India's foreign trade is to the tune of Rs. 20,000 crores, that almost all of it is seaborne and that more than 33 per cent of it is carried by Indian ships.

The country has invested Rs. 2000 crores in offshore oil explorations and that we will be mining 300 lakh tonnes of oil very soon.

We possess the largest Economic Exclusive Zone in the Indian Ocean in which lies a considerable volume of world's mineral and living assets.

India has received pioneer investor status in seabed mining and that efforts are in hand to explore various sources of mineral wealth.

A panorama of nuclear development

Today India is amongst a handful of nations and the only developing country to have the expertise for complete fuel cycle right from uranium exploration, mining, extraction and conversion through fuel fabrication, heavy water production and reactors to reprocessing and waste management.

WORK ON THE PEACEFUL use of nuclear energy was started in India four decades ago when it was almost a frontier science and only a few developed countries were engaged on it. India's nuclear fuel cycle strategy was chalked out in 1954, namely, a first stage of natural uranium reactors for producing power and plutonium, a second stage of plutonium fast breeder reactors producing power and more plutonium and also uranium-233 from thorium, and a third stage of uranium 233—thorium breeder reactors.

Fuel

India has limited uranium resources, but its thorium resources are the largest in the world. Without depending on foreign help, India's endeavour to develop the uranium exploration, mining and extraction techniques on its own have brought her to a position where not only can it meet its own needs but can offer assistance to other developing countries.

India is one of the very few countries that have the capability of producing nuclear fuel elements for research and power reactors. About 23 years ago, India had developed and built a fuel fabrication plant at Trombay with indigenous technology. This plant not only produces natural uranium fuel elements for India's research reactors but also thorium fuel for the Fast Breeder Test Reactor and other research purposes.

Starting in 1971, Nuclear Fuel Complex at Hyderabad now manufactures complete fuel elements including zircaloy structural materials for power reactors of the pressurised heavy water type. It also fabricates fuel elements from imported enriched fuel. It produces high purity materials required by the electronics industry, seamless stainless steel tubes and seamless ball bearing.

Fabrication of plutonium fuel is an extremely difficult task because of its toxicity. But this has been successfully accomplished at the plutonium metallurgy laboratory at Trombay. The fabrication of fuel elements for the Fast Breeder Test Reactor will be undertaken in this facility.

Heavy water

India's nuclear power generation programme rests on pressurised heavy water reactors. There are three Heavy Water Plants in operation at Nangal, Tuticorin and Baroda, two under commissioning at Talcher and Kota, and two under construction at Thal-Vaishet, near Bombay; and Manuguru near Hyderabad.

Technology developed in the country has resulted in the successful establishment of heavy water upgrading facilities. Upgrading plants based on electrolysis and vacuum distillation designed and developed by Indian efforts, have been set up at the Kota and Kalpakkam atomic power stations.

Power reactors

India is also one of those few countries in the world which possess valuable experience in the construction and operation of reactors. Five power reactors have been built in the country and five more are under various stages of construction.

To bring nuclear power to the country without delay and to give an opportunity to Indian technical personnel to acquire experience in operating nuclear power stations under Indian grid conditions, two units of 200 MWe each were obtained from USA and put to commercial production at Tarapur (Maharashtra) in 1969. This station uses imported enriched uranium. Since 1975, the fuel elements for the plant are being made in India using the imported enriched uranium.

The country's second power plant at Kota (Rajasthan) is a two unit (220 MWe each) system. It uses natural uranium as fuel and heavy water as moderator and coolant. The first unit of the station, though built with Canadian collaboration, started the process of indigenisation and this effort had to be considerably strengthened for the second unit which has 75 per cent indigenous content in terms of costs. Some of the nuclear equipment manufactured indigenously include, reactor vessel Calandria and end shields, steam generators, fuelling machines, etc.

This effort has culminated with the third atomic power station at Kalpakkam (Tamil Nadu) where the indigenous content has increased to 90 per cent in terms of costs. This station consists of two heavy water reactors units of 235 MWe each. The first unit has been commissioned in July 1983. With this India has become the seventh country in the world that have the capability to design, build, commission and operate a nuclear power plant by indigenous efforts.

The fourth and fifth atomic power projects at Narora (U.P.) and Kakrapar (Gujarat) will have two heavy water reactors with 235 MWe (each) capacity. These four units are of wholly indigenous design and manufacture. The indigenous technological capabilities form the base of India's future nuclear power programme which aims to generate 10,000 MW of power by 2,000 A.D., contributing about 10 per cent of the total power generation capacity of the country.

Reprocessing

About two decades ago, India became the fifth country in the world to start reprocessing of spent fuel. The reprocessing plant at Trombay was built in record time and costing less than half the cost of similar plant under construction in another country. The plant was refurbished and recommissioned successfully incorporating additions and alterations for expansion of its capacity.

A 100-tonne per year Power Reactor Fuel Reprocessing Plant has been set up at Tarapur for reprocessing the spent fuel elements from Tarapur and Rajasthan Atomic Power Stations.

Waste management

Backed up by more than 20 years of experience in R & D, different waste management schemes for the different types of plants in the nuclear fuel cycle from mining to reprocessing have been designed, installed and are being operated. India has also developed waste immobilisation by vitrification. This experience establishes that it is possible to construct

100-200 T/yr capacity plants economically with costs much lower than the ones elsewhere in the world.

Bhabha Atomic Research Centre

Amongst the developing countries, India has the unique distinction of evolving and building nuclear science and technology right from the laboratory stage to the industrial stage largely by own efforts. The Bhabha Atomic Research Centre (BARC) is the leading institute engaged in research in basic and applied nuclear sciences. It has the major responsibility for building up an infrastructure of nuclear technology besides continuing basic research in a wide range of disciplines. Much of the R & D activities at BARC are directed to supporting the nuclear fuel cycle connected with the heavy water reactor based nuclear power programme. These include nuclear physics, reactor chemistry, nuclear materials, health and safety, radiation protection and reactor engineering.

India has built four research reactors and a fifth one is under construction. In the field of research reactors, India's expertise is fully mature. The 1 MW swimming pool research reactor Apsara built in 1954, is still operating. A zero energy fast reactor Purnima, initially used plutonium oxide fuel elements, is being modified to run on uranium-233 as fuel. R-5 has been designed and is being built entirely by Indian experts. It incorporates many novel features including a new fuel concept.

BARC also produces a variety of radioisotopes in its research reactors for use especially in medicine, industry, agriculture and research. It has been supplying radioisotopes not only to users within the country but abroad also.

In medicine, isotopes have been used for diagnostic and therapeutic applications at various nuclear medicine centres. Radiation sterilisation facility has been set up and made available to medical products, hospitals and pharmaceutical industry. Industrial applications of isotopes have included movement of silt on the sea bed, detection of leaks in buried pipelines, seepage in dams, smoke alarms, level gauges, thickness in steel plates etc.

In agriculture, applications include development of a large number of mutants in cereals and pulses. Mutants of groundnut having higher oil content, higher pod size and higher yield have been obtained and released to farmers for utilisation. Techniques for radiation disinfestation of stored wheat, inhibition of sprouting in onion and potatoes have been demonstrated successfully.

BARC provides a country-wide radiation monitoring film badge service. Surveillance of health hazards, including environment, are routinely carried out at and around all nuclear plants to assess the radioactive releases.

Experience gained in the design and fabrication of control systems and instruments for research reactors has led to the setting up of a separate electronics manufacturing unit as a public sector unit known as Electronics Corporation of India Ltd.

A seismic station at Gauribidanur has been operating round the clock to detect seismic signals from nuclear explosions. An on-line computer immediately analyses the signals and prints out the relevant information.

A Variable Energy Cyclotron has been set up at Calcutta as a national research facility. It is being used by various users including several universities. Major precision parts were indigenously manufactured—some of them for the first time in the country. Work is underway to develop magnetohydrodynamic (MHD) technique for generation of power from thermal plasma. A 5 MW thermal experimental coal based MHD facility has been set up at Tiruchi (Tamil Nadu).

Reactor research centre

As India's uranium resources are somewhat limited, its second stage reactors will be plutonium fuelled fast breeders. A separate research centre where a 40 MW thermal Fast Breeder Test Reactor is under construction, has been established at Kalpakkam (Tamil Nadu) to carry out research and development in the areas of fast reactor technology and the associated fuel cycle. All the major components including reactor assembly, sodium pumps, sodium heat exchanger, steam generator and handling flasks for the test reactor were fabricated by Indian manufacturers. The design, construction and R & D experience generated at this research centre would provide sufficient confidence to undertake the construction of a large fast breeder reactor. Infact the preliminary design of a 500 MWe prototype Fast Breeder Reactor has already been completed. It is envisaged that such reactor may be commissioned in mid 1990s.

New research centre

A new centre for advanced technology has been planned at Indore (M.P.). Here necessary infrastructure will be developed for research in thrust areas of high energy accelerators, lasers and fusion using advanced technology such as plasma physics, particle beams, cryogenics, super-conductivity, computer modelling, microelectronics etc.

Training of personnel

Right from inception of the atomic energy programme in the country, emphasis has been laid on the development of scientific and technical personnel so that the country would not have to look abroad for experts. A training school was established in BARC in August 1957. About 150 young graduates in science and engineering are selected every year for a one year integrated course.

BARC also conducts various other training courses to meet specialised requirements such as for hospital radiological physics, radiation medicine, safety aspects in industry, medical research applications of radiation sources including radioisotopes, industrial radiography, research reactor operator, technicians etc.

The Nuclear Training Centre at RAPS, Kota, was set up in 1968 for training, maintenance and operation personnel for nuclear power plants. It trains around 130 graduates at a time in different areas of work. Training includes field training for 18 months at operating power stations.

International relations

India is a member of the International Atomic Energy Agency right from its inception in 1957 and designated member on its Board of Governors as one of the most advanced in the technology of atomic energy. India offers training facilities, fellowships, scientific visits etc. to member-countries of the International Atomic Energy Agency under its Technical Assistance Programme.

Services of scientists from India for expert assignments in various countries under this programme are also being made available. Many experts from India have assisted the International Atomic Energy Agency as Members of various Technical Committees and Advisory Groups. India is one of the founding members of the IAEA Regional Cooperation Agreement for South-East Asian countries and is actively participating in its various programmes.

Bilateral cooperation Agreements in the Peaceful Uses of Atomic Energy have been entered into with several developed and developing countries with mutual benefits to both sides.

(Courtesy : Deptt. of Atomic Energy)

Do you know that

Coffee Plantation is one of the most highly organised industries in the country.

Coffee Plantations cover 2.17 hectares and that the annual production is to the tune of 1.15 lakh tonnes.

Every year we export 85,000 tonnes of coffee worth Rs. 200 crores.

The Coffee Industry provides direct employment to 2.7 lakh workers and indirect employment to many more lakhs.

Karnataka, Kerala and Tamilnadu are the traditional coffee growing States and that coffee is being introduced to 12 more States and Union Territories.

The Central Coffee Board Research Institute in collaboration with National Environment Engineering Research Institute, Nagpur is introducing various anti-pollution methods and steps to minimise the use of water in coffee processing during the Seventh Plan period.

A sum of Rs. 6.82 lakh has been earmarked by the Coffee Board to popularise these methods during the Seventh Plan ☐

Space technology for India

S. Setty and S. Krishnamurthy

The Indian space programme is organised for an integrated development of space technology to harness its potential for the progress of the country. The programme, within its broad framework, encompasses the development of space technology for carrying both scientific and application oriented experiments particularly in the areas of communication, resource survey and meteorology.

THE INDIAN PROGRAMME which made a modest beginning with the establishment of the Thumba Equatorial Rocket Launching Station (TERLS) near Trivandrum in 1962 for conducting sounding rocket experiments in Astronomy and Aeronomy, soon established a national base by setting up the technological infrastructure and capability for indigenous development of launch vehicle and satellite technologies and generating a core of trained manpower.

During the seventies, the efforts were primarily geared towards carrying out research and development in a variety of scientific and engineering disciplines of relevance to launch vehicles and satellites as well as conducting selected large scale experiments in communications and remote sensing involving the use of both indigenously built satellites as well as those procured from foreign space agencies. In addition to the successful launching of seven satellites, some technological but mainly experimental application satellites for carrying out communication and remote sensing experiments and development of a satellite launch vehicle, SLV-3, capable of launching a 40 kg satellite into near-earth orbit constitute major accomplishments of space technology during this decade.

The eighties will primarily aim at transforming the experimental efforts of the seventies into semi-operational/operational systems to provide space services in communication, meteorology and remote sensing and the development of launch vehicles capable of launching 1000 kg remote sensing satellites into sun-synchronous orbits.

Rocket technology

From the early sixties a variety of Indian sounding rockets have been developed for the exploration of the upper atmosphere and ionosphere and also to carry out astronomy experiments. These rockets, either single stage or two-stage, are spin-stabilised and can launch payloads from a few kg to 350 kg upto an altitude range of a few tens of km to about 400 km.

The decision to develop a Satellite Launch Vehicle (SLV) was taken in the late sixties. A well defined, time-bound project to design, develop and flight test an indigenous launch vehicle for injecting a satellite of about 40 kg into a near earth orbit was initiated in 1973.

SLV-3 had its first successful test flight on July 18, 1980 when it placed a 35 kg Rohini Satellite (RS-1) into an elliptical orbit of 900 km apogee and 300 km perigee at an inclination of 41°. Subsequently, on May 30, 1981, a similar Rohini Satellite was injected into a 180 × 424 km orbit. SLV-3-D-2, the last in this series, successfully launched the RS-D-2 satellite with its landmark sensor payload on April 17, 1983.

Satellite technology

Satellite technology has been mastered by building and launching seven satellites, both experimental and technological, in a phased manner in the decade 1972-83. Indian capability has been established in the design and development of spinning satellites as well as three-axis-stabilised satellites for both near-earth orbit and geostationary applications.

The first satellite, Aryabhata, launched by a Soviet carrier rocket in 1975 was essentially a technological satellite which enabled the establishment of core facilities in addition to providing us experience in the design, fabrication, launch and in-orbit management of satellites.

Bhaskara I and Bhaskara II, similarly launched in June 1979 and November 1981, were experimental earth observation satellites for observing the earth's surface in the visible, near infra-red and microwave frequencies. The Bhaskaras provided valuable experience in integrated end-to-end systems development and application/utilisation, from the configuration of the spacecraft to reception and processing of the remotely sensed data, generation of user oriented data products and their utilisation.

This approach was also followed in the APPLE (Ariane Passenger Payload Experiment) project aimed at acquiring experience in designing, building, launching, operating and utilising a three-axis-stabilised spacecraft in geostationary orbit. The Indian made APPLE spacecraft was launched by European Space Agency (ESA)'s Ariane Launch Vehicle in June 1981. APPLE enabled the conduct of a variety of digital telecommunications/radio experiments and live TV coverage/demonstrations in India.

The Rohini Satellite, RS-1, launched in July 1980 by SLV-3, provided experience in miniaturisation and high density packaging. The second and third Rohini Satellites additionally carried a solid state imaging system, built around a linear photo diode array, for land mark sensing. These were launched by SLV-3 developmental flights in May 1981 and April 1983.

Space applications

The main efforts in space applications are to use space technology for enhancing communications especially with backward and inaccessible regions of the country and develop an effective nation-wide system for the timely survey and management of natural resources and environmental monitoring. In the last fifteen years, a number of applications experiments have been conducted in communications, remote sensing and meteorology.

Realising the potential of satellite television or mass communication and education, particularly in rural India, ISRO developed expertise in space telecommunications, direct TV broadcasting, and the technology of geostationary communications satellite development and their in-orbit management and utilisation.

Satellite Instructional Television Experiment (SITE) was conducted during 1975-76 using NASA's ATS-6 satellite to gain practical experience in satellite-based TV broadcasting to far-flung areas. Satellite Telecommunication Experiment Project (STEP), conducted with the Franco-German Symphonie satellite in 1977-79, was for gaining experience in domestic telecommunications.

The indigenous three-axis-stabilised communications satellite, APPLE, launched in June 1981, provided continuance of the applications programme initiated under SITE and STEP.

INSAT represents the first operational space system in India for domestic communications and meteorology. After the INSAT-1A failure in 1982, the INSAT-1B, launched in August 1983, is the first operational satellite for domestic communications.

Remote sensing

The Indian remote sensing programme aims to develop technology and skills required to supply remotely sensed data from spacecraft, aircraft and other platforms, to demonstrate the utility of such data for efficient management of natural resources and for environment monitoring. A number of aircraft-based remote sensing surveys have been carried out for land use studies, soil surveys, agricultural monitoring etc.

Further, the data from the US Landsats and meteorological satellites, TIROS-N/NOAA-6, along with aerial survey data have been utilised for geo-morphological mapping, soil survey studies, land use studies, forest inventory and management, flood mapping, snow melt forecasts, agricultural inventory and crop yield estimates and water-resources survey and management.

The software and hardware for preparing browse products, precision products, colour composites and computer compatible tapes, other data products, the development of visual interpretation and ground truth collection techniques as well as equipment for this programme have enabled India gain the expertise to establish a national end-to-end satellite-based remote sensing system for resources survey and management and environmental monitoring. A National Natural Resources Management System (NNRMS) is under evolution for nationwide co-ordination of various activities pertaining to remote sensing.

Weather forecasting

Use of satellite imagery for operational weather forecasting began in 1960. Seven Automatic Picture Transmission (APT) Stations in the country provide the India Meteorological Department with low resolution imagery in visible and near IR channels from US and Soviet weather satellites. Data from TIROS-N/NOAA-6 satellites are used for sea-surface temperature, cyclone energetics and other studies. Since 1963, India has been regularly making measurements of the upper atmospheric temperature and winds using sounding rockets launched from TERLS. India also participated in the Monsoon Experiment (MONEX-79) deploying four ships in the Indian ocean, to improve the understanding of factors governing the onset, withdrawal, intensity and spatial/temporal distribution of the monsoon.

With the availability of Very High Resolution Radio-meter (VHRR) data and imagery from INSAT-1B, meteorological observations have improved significantly. Reception of local meteorological data from remote Data Collection Platforms (DCPs) through the data relay transponders on INSAT, on a routine basis, will provide an integrated picture of the entire sub-continental weather and climatic pattern.

A perspective for the Indian Space Programme is obtained from the international situation in space and India's developmental needs.

The USA and USSR are rapidly moving to establish orbiting space stations. The US Space Shuttle Transportation System with reusable orbiters is launching satellites with increasing frequency into near-earth orbit from which they can be propelled to their final orbits. The USSR already has orbiting Salyut Stations with which automated space probes dock periodically; the Soyuz space ships take and bring back crews and supplies from Salyut stations.

Europe has developed the Ariane Launcher with France playing the leading role. Ariane's demonstrated ability to place large satellites for communications and other applications into geo-stationary orbit provides independent launch capability for Europe and meaningful competition to the US Shuttle commercial launches. Japan already possesses the M and N launchers capable of launching scientific satellites in low earth orbits and small satellites into geo-stationary orbit.

Using the rocket systems developed for its ICBMs China has already launched eight satellites and recovered some of them. They have recently placed their own communications satellite in orbit.

The Geo-Stationary Orbit is rapidly becoming a scarce resource. Already crowded with communications, meteorology and other satellites, finding suitable geo-stationary slots has become very difficult for late-comers. The 'first-come-first-served' principle followed for many years for regulating parking in this orbit has favoured the nations who possessed the wherewithal to launch and occupy slots.

Plans for India

In this evolving scenario, the strategy for India is clear. If the objective of using space technology for selected national applications is to be realized and the benefits reaped, the country cannot afford to ignore the realities of international geo-politics in space and must develop an independent self-reliant approach.

There are arguments that all countries cannot possess every technology and the late-comers especially from the developing world must perforce be at the mercy of those that possess the technology or have the money to buy it. Such arguments are well-known and not specific for space technology. They are fallacious for any country however small, leave alone the sub-continent of India with its heritage and resources. In the age of electronics, computers and molecular biology, the key to national development and a peaceful and just international order is not dominance of big powers but to discover ways of vanishing disparities through the concerted use of Science, Technology and Humanism.

The Space tasks for India are clear. It must build its own satellites, launch them and put them to use for communications and remote sensing.

With the completion of the experimental phase, the Indian space programme enters the operational phase

in the areas of communications and remote sensing. The plans during the current decade envisage strengthening the R & D efforts in space applications, communications, meteorology and geodesy and exploring new areas of applications of national relevance, developing operational remote sensing and communication satellites and improving the technology of SLV-3 to launch heavier payloads for remote sensing applications. The following tasks have been set for the Indian space efforts for the eighties.

Launch vehicles

An advanced version of SLV-3 called ASLV is presently under development. ASLV will enable orbiting 150 kg. class of satellites into near earth orbit. Parallel work has also been initiated to develop PSLV, a vehicle capable of launching 1000 kg. class satellites into sun-synchronous polar orbits, primarily for remote sensing missions. The programme calls for R & D in advanced inertial systems, materials and fabrication technology, liquid engine technology, software systems etc. Eventually, the country will establish capability for geo-synchronous launch.

Remote sensing satellites

A new three-axis-stabilized Indian Remote Sensing Satellite (IRS) series, in polar sun-synchronous orbit, is planned for establishing an operational remote sensing satellite system. The first of the series, IRS-1A, is scheduled for launch in 1985-86 from USSR and will carry solid state cameras capable of providing resolutions of the order of 40 metres in four spectral bands in the wavelengths range of 0.4 to 0.9 microns. The data will be used primarily for applications related to agriculture, hydrology, geology and forestry.

The second satellite of the series, IRS-1B, will carry cameras of higher spatial resolution capability, typically between 10 and 15 metres. The IRS-2 series envisages the use of additional sensors for imaging in thermal IR band. The operationalised communication and meteorological services through foreign procured INSAT spacecraft will have to be eventually replaced by indigenous satellites to provide continuity of service in these areas. Plans are on hand to develop such indigenous spacecraft with high reliability and long life.

Collaborative efforts

Space missions are inherently complex and large scale endeavours involving the integration of many disciplines. Though the missions are unique and often outside the experience of a particular industry or institution, the very nature of the technology requires the expertise and facilities in industries and institutions often stretched to their limits. The Indian space programme, from the beginning realised this aspect and has adopted the policy of collaborative efforts to utilise the expertise and infrastructure in other agencies in areas of relevance to the programme. The development of SLV-3 alone involved the participation of more than 20 major industries, some of them in private sector, and several educational and research establishments.

Courtesy : SPACE, ISRO

NEW ARRIVALS JULY 1984



GOVERNMENT OF INDIA PUBLICATIONS

LIST OF NEW ARRIVALS — JULY 1984

Sr No	Title	Price Rs. P
1	Inter State Movements/Flows of Goods by Rail and River for Twelve Months ending March, 1978 (Print 1983) PDGCIS 83 4 77-78 (Final)	110 00
2	Statistics of Foreign and Coastal Cargo Movements of India April 1981 to March 1982 Vol I (Print 1984) PDGCIS 92 82 I	28 00
3	List of Valuers Registered under Section 4(3) of the Estate Duty Act, 1953 (From 1.8.1975 to 30.6.1983) (Print 1984) PDI. 139	6.75
4	List of Valuers Registered under Section 34 AB of the Wealth-Tax Act, 1953 (upto 30.6.1983) (Print 1984). PDI 140	13 00
5	Indian Labour Year Book 1983 (Print 1984) PDLB 19 83	136 00
6	Report of the Committee on Child Labour. (Print 1981) PDL 508 (Rep)	10 00
7	Technical Note on Monitoring of Construction of High Embankments of Soft clays (Print 1984) PRB 1 346 (N).	23 50
8	Public Enterprises Survey 1981-82. Volume-2 (Print 1983). PFD.197 81-82(II)(E)	58.00
9	Public Enterprises Survey 1982-83 Vol. I (Print 1984) PFD 198 82-83(I)(E)	105.30
10	लोक उद्यम सर्वेक्षण 1981-82 खण्ड-1 (प्रिंट 1983) PFD 198 81-82(I)(H)	108.95
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Cure for eye diseases

P. Bhattacharyya

The Moscow Research Institute of Eye Microsurgery headed by world famous eye surgeon Professor S. N. Fyodorov has been engaged in treating successfully various diseases of eye through new surgical approach in correcting myopia, corneal transplantation, removing malignancies and tumours affecting the iris and ciliary, correcting cataract, glaucoma, etc. Its latest diagnostic use of scanning ultrasonic biometry electroretinography, vitrectomy and treatment by laser equipment have made restoration of vision a reality for those who had lost all hopes to see again. Currently, the Institute is engaged in reconstructive eye surgery.

THERE CAN HARDLY be a more traumatic experience for man than of inexorably advancing blindness. Thousands upon thousands of people suffer this agony all over the world everyday. Therefore, one can only imagine how jubilant was 36-year-old Margcir Margeirson, a resident of Keflavic, a city in Iceland. An incurable myopic for 25 years, when two laser-aided operations done at the Moscow Research Institute of Eye Microsurgery (MNIIMG) headed by world famous eye surgeon Professor S. N. Fyodorov restored Margerison's eyesight 100 per cent, his joy knew no bound. Yet, it was just one of the 6,000 routine operations carried out successfully at the Institute till recently.

Under the guidance of Professor Fyodorov the MNIIMC is carrying out very important and pioneering work in various fields of ophthalmology. In fact,

it has become a world centre of eye surgery, which trains hundreds of specialists from other countries including India, France, USA and Japan in different methods of eye treatment developed by the Institute.

Treatment of myopia

One of the most striking achievements of the MNIIMG has been the surgical correction of myopia. People suffering from high degree of myopia constitute nearly one-third of the visually disabled. Surgeons at the Institute treat the cases of progressive myopia with the help of various techniques, especially Keratomelectomy and scleral buckling. Keratomelectomy involves partial excision of the upper corneal layer, which is then formed into a lens and replanted into its original position in the corneal layer. The procedure developed by the Institute differs from the similar methods in that the lens here is not frozen in preparation. Out of 120 such operations performed in the institute on patients with non-progressive myopia ranging from 10 to 25 diopeters, 80 per cent of the cases regained perfect vision while the rest showed dramatic improvement says A. I. Ivashina, a specialist of the Institute.

Correction of progressive myopia

Progressive myopia cases are treated by scleral buckling. Under this method the surgeon strengthens the alienated posterior ocular segment by grafting. Out of more than 900 such operations carried out at the MNIIMG further progress of the disease was halted for at least 15 years in 98 per cent of the cases.

The basic idea behind the technique for myopic correction developed by Professor Fyodorov is that a series of radial incisions made in the cornea weakens its periphery. The intraocular pressure then forces the incised area to bulge out while the central cornea undergoes a compensatory flattening. This results in the correction of myopic as also of myopic astigmatism.

To an inexperienced observer the operation, which usually takes only 5 minutes and in no case more than 10 minutes and is carried out under local anaesthesia, may apparently look simple. The patient is able to leave the hospital as soon as the operation is over. But the brief minutes of operations are preceded by thorough examination programme involving measurements of up to 11 individual parameters. The well-known US ophthalmologist Dr. Lambros, who learnt Keratotomy here said that the method opened a new era in ophthalmology. Ophthalmologists from 17 countries have learnt the technique. It was named the "Russian operation" by the American doctors.

Among the many achievements of the MNIIMG the intraocular lens IOL-2 developed by it is well-known. Known in the international market as Sputnik, it is used in many countries. In the USA alone, the number of Sputnik lenses implanted every year exceeds 5000. The model is unrivalled for lightness. It weighs a mere 5.5 mg in air and 0.8 mg in the eye.

The main advantage of the intraocular correction is that binocular vision can be restored without the need of auxiliary correction. At present IOL implantation is attempted in cases of iris coloboma, mydriasis and other conditions, says Dr. E. V. Egorova, Chief of Department.

New techniques for cataract operation developed at the Institute make it possible to avoid rupturing of the posterior lens capsule. Intraocular lenses designed for the purpose are accordingly anchored to the edges of the dissected posterior capsule. In contrast with complete removal of lens, inflammation subsides in half the time with all the vital ocular indices returning to normal functioning more rapidly.

Corneal transplantation

Corneal transplantation is considered one of the most sophisticated field of ophthalmology. Despite significant progress in this area, some cases, particularly those associated with edematous dystrophy and burn induced leukoma, have proved extremely stubborn. But now even many virtually hopeless cases can benefit from the artificial cornea or Keratoprosthesis developed at the Institute after a 15-year-long search.

In the first stage of surgery the Keratoprosthesis is inserted together with a temporary plug. Fuse accretion of the implant to the cornea is allowed before the central part of the leukoma is removed and the optical cylinder screwed into place.

All the patients of the Institute who had been earlier pronounced blind caused by extremely severe chemical and thermal burns to the cornea as well as its dystrophic opacification exceeded 260 in number. Almost all of them were able to see again after surgery and the majority of them even regained high visual acuity varying between 0.4 and 0.8.

The Keratoprosthesis developed by the Institute has been patented in the USA, the UK, West Germany, the Netherlands and Italy. It is highly regarded by the doctors of those countries.

Removal of tumours

Till recently the appearance of an intraocular tumour inevitably led to enucleation. The scientists of the MNIIMG were the first to demonstrate the feasibility of removing tumours affecting the iris and ciliary body and at the same time saving the eye. The latest techniques of functional diagnosis provide the opportunity to pin-point the extent of lesion. Coupled with intraoperative techniques of tissue differentiation, it means greater safety in tumour excision while the visual function of the eye is preserved. The new surgical approach for removing malignancies of the choroid developed at the Institute is an unprecedented attempt in the world, says Professor L. F. Linvik, Deputy Director of Research of the Institute.

So far there had been more than 400 such surgery cases at the Institute. The patients were observed for periods of up to 15 years. There were no signs of recurrence or decreasing vision in the operated eye.

Vitrectomy

A large number of ocular diseases lead to opacification of the vitreous and eventual blindness. Yet not till recently surgery on the vitreous was attempted because of the high risk involved. Such surgical interventions became possible only with the invention of a specialised instrument called Vitrectome.

The Vitrectome is capable of excising and aspirating the opacified areas and then filling up the empty space with a special liquid substitution of the vitreous. The latest diagnostic methods including scanning ultrasonic biometry, electro-retinography and others contribute to the success of the surgery.

The introduction of vitrectomy into clinical practice made restoration of vision a reality for those who had lost all hope to see again. The actual cause of blindness in such patients is diverse, which include diabetic hemorrhage into the vitreous, high blood pressure, injury, vitreous opacification of inflammatory and degenerative nature. Following surgical interventions one-fifth of the previously incurable cases responded with a high visual acuity and about a third of the patients could differentiate shapes of objects.

The scientists at the Institute constantly try to expand the area of the application of the vitrectome. It is now used to tackle severe forms of diabetic retinopathy and removal of the lens luxated and subluxated into the vitreous. The lensectome is a special device developed at the Institute to facilitate extraction of opacified lens. The surgeons can now approach the lens leaving the cornea intact. The unit can also be adapted for more easy extraction of cataract.

Treatment of glaucoma

As Prof. S. N. Fyodorov says, the scientists of the Institute are successfully moving forward now in a number of new directions. The concept of open angle glaucoma is one of them. According to

specialists, cataract and glaucoma are the two worst eye diseases that are responsible for most cases of blindness.

After thorough research the scientists of the Institute came to the conclusion that glaucoma is essentially an ischemic disease which affects the anterior segment of the eye. At the initial stage here is almost 3-fold reduction in blood supply. This, in turn, leads to dystrophic changes in the ocular draining system and in consequence, to elevated intraocular pressure.

To cure glaucoma a superficial scleral flap is inserted into the opening of the anterior chamber angle. The scleral tissue rich in small capillaries drains off the excess intraocular fluid, which the faulty ocular draining system is not able to cope with. This results in lowering the intraocular pressure and consistent improvement in the course of glaucoma ensues.

Laser equipment has a great future in ophthalmology. Certain types of radiation produce a beneficial effect on metabolic processes in retina. This quality of lasers is made good use of in the treatment of ambliopia—"functional" retinal blindness. Half the patients with persistent blindness resisting conven-

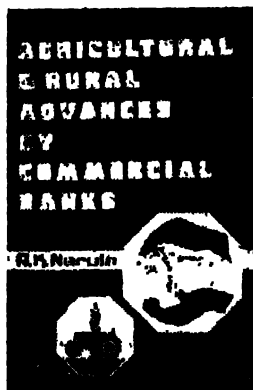
tional treatment responded to laser irradiation with restored vision, says, Dr. Fyodorov. The scientists of the Institute are now approaching another new landmark in ophthalmology—reconstructive eye surgery. The progress in this field is in no measure due to the extensive use of computer technology.

A message of hope

The scientists of the Institute led by Professor S. N. Fyodorov are now trying to develop a new treatment, which would make it possible to enable the old people to do away with their glasses worn for far-sightedness. In fact, Professor Fyodorov has always been against wearing glasses. "Treatment for eye diseases tested by thousands upon thousands of operations performed in our Institute, make us feel confident that glasses can be done away with. Each individual should be able to see the world unaided by glasses, using only his own nature-designed corneal organs rather than artificial devices", Professor S. N. Fyodorov stresses. That is indeed a great message of hope, for today civilisation subjects man's eyes to so much strain that by the time one is 15, signs of wear begin to show. And with the rapid explosion of knowledge pressure on the eyes is expected to increase more. □

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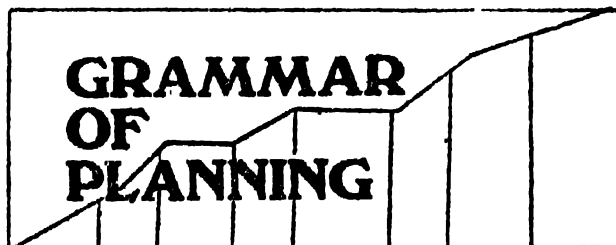
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P. R. Dubhashi

A Serialisation **11**

The process of planning

Planning has to be done for various time-periods, sectors and levels. It has to be given a concrete shape by formulation of policies, programmes and projects. As the national plan has to reflect the popular consensus, it has to pass through successive stages for formulations, discussions and clearances. Moreover, a suitable and effective machinery has to be devised for plan implementation, the author says.

PLANNING IS NOT a simple once-and-for-all operation to be completed in one step. It is a complicated-web of a connected series of operations. It has to be done for various time periods—long term, medium term and short term. Aggregative national planning has to be followed and linked with the planning for various sectors—primary, secondary and tertiary, public cooperative and private. It has to be done at various levels—national, state, district and other local levels, and finally the project or enterprise level. It has to be given a concrete shape by formulation of policies, programmes and projects. Its practical success has to be ensured by devising machinery for plan implementation. Resources have to be assessed, identified and mobilised for providing the wherewithal of planning.

Popular consensus

All these aspects have to be tackled, one by one, with the help of different departments of government and specialised agencies, expert groups, including economists and technicians, representatives of business, labour, consumers and other interested groups, political parties, voluntary institutions and indeed the people at large in a democratic community.

The national plan has to reflect the popular consensus and hence the need for popular involvement

in the process of planning. In some countries, plans need to be approved by suitable legislation and in any case the plan, when it takes shape, needs to be approved by the Cabinet and the Parliament. In a federal set-up, the plan must have the clearance not only of the federal government but also governments of the constituent units. To achieve all this, the plan has to pass through successive stages for formulations, discussions and clearances. That is why, as W. Arthur Lewis has rightly observed : "Planning is only in part an economic part; to an important extent it is also an exercise in political compromise."

Since the plan period represents comparatively a very short interval in the life of the national community, it is necessary that these plans are formulated against the backdrop of long term goals and trends. This is what the perspective plan seeks to accomplish. Such a perspective plan must take into account not only the economic trends of the past, but also the innovations and changes which science, technology and organisation are likely to introduce. Surveys and futuristic studies must provide the basis in the preparation of the perspective plans. The perspective plans, therefore, have to be the work of experts. It may be left to the perspective planning division in the plan organisation which may parcel out the work to research institutions.

The Perspective plan

The perspective plan must have the commitments of the political authority. However, in non-communist democratic countries, the government that be has political authority for briefer intervals. The parties in power may change with the next election and the perspective of one party in power may be different from that of another. This may cast doubt on the sanctity of the perspective plan.

A five year or seven year plan has to be a more definitive document. It normally passes through several stages. Thus, in the Indian process of planning, it passes through at least three distinct stages. First, preparation of the approach document, second, formulation of the draft plan and the third, preparation of the final plan document.

At the approach stage, the planning authority has to prepare a brief document evaluating the achievements and failures of the last plan and in the light of such evaluation the goals that need to be accomplished through a fresh plan. Such goals have to be articulated in terms of growth rate, employments, incomes, its distribution and output mix and targets of principal commodities. The strategy for reaching these goals and the policy framework that is needed may have also to be indicated in general terms. At the approach stage, the focus is on general magnitudes like size and sectoral allocations rather than on the details of the programmes and proposals.

Sound forecasts

The approach to plan, however, cannot be based only on evaluation of the past and hopes for the future. It must be backed by technically sound forecasts. These forecasts have a particularly important place in the process of planning in the western economies.

Thus in France, a year ahead of the plan itself, Commissariat du Plan and the Department of Economic and Financial studies (SEEF) jointly explore the field of the plan by investigating for the period of time it is to cover the prospects of the development of the economy. The Dutch forecasts, viz., "An exploration of the economy potentialities of the Netherlands 1950—70" is another example.

These forecasts are particularly relevant to planning for an economy which allows considerable amount of freedom to consumers and producers. Forecasts are a futuristic analysis of spontaneous behaviour. This is not so necessary in systems of centralised planning as in Soviet Russia. But even their forecasts of technology are necessary; nor can changes in the future scales of preference be entirely ignored. These forecasts are based on several assumptions and may not entirely be foolproof. However, they are in the words of Bauchet, "as indispensable preliminary to any Plan. The merit of the forecasts is that they indicate the nature of development in the distant future so that a rational choice can be made between various rates of expansion."

After taking the information and forecasts into account, the political authorities in France decide what the rate and nature of expansion shall be and send their instructions to the Commissioner General. These instructions are the framework into which the Modernisation Commissions must fit their efforts. Thus, if forecasts constitute the technical part of planning, the 'instructions' would reflect the element of political choice. But the forecasts enable the 'instructions' to be objective and not just arbitrary political choice.

The approach document is a tentative document which clears the decks and sets the process of plan. It is tentative not only in its magnitude, even its assumptions are liable to change. The approach document could be discussed by various technical and departmental organisations. It can form the basis for nation-wide discussion on the plan in the pipeline. Indeed, one of the objectives of preparing such a

document is to invite suggestions and ideas from as wide a circle as possible.

The draft plan

On the basis of the reactions to and the observations on the plan documents, more detailed information is collected by the planning authority. The draft plan may thus be prepared. Some time it may be described as a plan frame.

The detailed work necessary for preparing the draft plan may have to be done through a series of working groups consisting of economists and administrators from various departments, interested groups or advisory bodies. The deliberations of the working groups may not be very fruitful unless the departments do their own home work. The heads of various departments may appoint their own study groups for each of the important sectors or sub-sectors. The working groups may hold a series of meetings or form task forces.

The integration of the reports of various working groups dealing with various aspects of planning like resources mobilisation, or manpower planning or dealing with various sectors of planning have to be coordinated in terms of a consistent plan frame. The staff of the planning authority would have, therefore, to associate themselves at all stages with the deliberations of the working groups and help the formulation of the sectoral or aspectwise plan documents and their suitable integration.

In a system of planning for a mixed economy, it is essential to plan for the private sector as well. The process of planning for private sector may have to be different from planning for the public sector. For the former, planning must involve private entrepreneurs as well. Committees for planning in different sectors must have on them the representative of the private sector. The targets cannot be imposed *a priori* by the public authorities but these must be formulated on the basis of schemes formulated by industrial firms and business houses as well as trends regarding consumer preferences. All these will have to be assessed and formulated by the committees where business interests are represented. This will give them the feeling that they have helped in formulating the plan and are responsible for their implementation.

The draft plan at the national level has to reflect the draft plans at the state levels, the local levels and the enterprisers. These have, therefore, to precede the formulation of the national draft plan and they will have to be integrated at a successfully high level. This procedure would require a fairly detailed time table which has to be followed in practice. However, the time-table for the preparation of the plan may get upset by the failure on the part of some agency or the other to give a final shape to its own contribution.

The draft plan so prepared must have the seal of approval of political authority before the planning authority could go ahead preparing the final plan. If the political authority wishes to make certain changes, these may have to be accommodated by the planning authority by suitably revising the draft. If the planning

authority keeps the political authority informed of the progress in the process of planning through various formal or informal channels of communications, the draft plan can pass muster without much alterations. It is one of the functions of the draft plan to produce various alternatives so as to enable the political authority to make the final choice. If the planning authority is able to produce clear-cut alternatives, it will facilitate the choice by the political authority. But there may be ambiguities or new problems or objectives may be thrown up at the stage of consideration of the draft plan and this may delay the formulation of the final stage.

The final document

The final plan has to embody all the revisions in the draft which have been finally accepted and at the same time work out in fair amount of detail various programmes and policies. The plan document has to consist of a number of chapters dealing with approach, size, general content, allocation of resources, estimate of resources, sectoral programmes, manpower programmes, administrative organisations, spatial dimensions, etc. The final plan document may be printed and may run into a thousand or more pages. The document has to be signed by the members of the planning authority and may have to be formally approved by parliament. In some countries, a law is enacted approving the plan.

It is necessary that the various stages in the plan formulation are completed on time or else, as it happened in India, the final plan document would be out only after the plan period has already commenced.

In some cases, even the inauguration of the plan may have to be postponed, thus resulting in plan holidays.

Annual plans

The five year plan or the seven year plan is implemented from year to year. Hence annual operational plans, coordinated with budget are also to be prepared. For annual plans also, working groups may have to be constituted to prepare details of the annual plan. The annual plan document must contain details for various projects, and time schedule for construction. In a large country, where the administration is federal in nature, the working groups may have to consist of the representatives of the State Governments, the Central Government and the planning authority. Thus, while the current annual plan is in operation, the next year's annual plan has to be formulated simultaneously.

In a planned economy, the budget must clearly exhibit the development plan on the capital side of expenditure. This has to be a coordinated exercise between planning and finance authorities.

Such an elaborate procedure of planning may be time consuming. Indeed it may degenerate into a ritual and its result may not be commensurate with the time spent by the numerous agencies. After all plan procedures are not an end in themselves. But there is every fear that this may happen with the

result that the very basic purpose of planning and considerations of basic issues in depth may well be sacrificed at the altar of the plan procedure.

Both the annual plans and the intermediate period plans will have to be continuously modified in the light of experience. The experience may be assessed through systematic evaluations. In India, annual plans are evaluated but the result of evaluation may not be available on time so as to facilitate suitable changes in the new year plans. In addition, there is a mid-term appraisal in the Indian planning process.

The plan procedures by themselves are not enough. What is needed is the ability to assimilate the result of experiences and studies and their articulation in terms of more worthwhile plans. □

Treating corneal diseases

Associates of the Research Institute of Eye Diseases and Tissue Therapy of Odessa (USSR) have evolved and introduced a new method of treatment for severe corneal diseases.

When a patient's eye develops a persistent ulcer, his eyesight deteriorates catastrophically. Specialists know that such ulcerous lesions and other cure-resisting erosions can eventually destroy the eye. For many years attempts have been made to find a cure for this ailment. But only recently has an effective method been devised. A technique proposed by Professor Nadezhda Puchkovskaya, Director of the Institute, is based on coating the affected cornea with special biological agents. This curative "shield" stimulates rapid healing. □

National waterway from Haldia to Farakka

THE GANGA RIVER STRETCH between Allahabad and Haldia has been declared as a National Waterway. With a view to developing the above waterway, the total waterway length has been divided into three stretches: (i) Farakka-Haldia; (ii) Patna-Farakka; and (iii) Allahabad-Patna.

In so far as the development of the stretch between Farakka and Haldia is concerned, the scheme for providing infrastructure facilities on this stretch had been sanctioned and is being executed on an agency basis by Central Inland Water Transport Corporation and Calcutta Port Trust. The Scheme includes terminal facilities at Haldia, Nabadwip, Triveni and Barhampur.

In order to implement schemes on the National Waterways, it is proposed to set up a separate authority. Such an authority, when set up, shall be able to complete the scheme on the National Waterway more efficiently as time bound programmes. □

Stroke

Dr. M. C. Maheshwari

Stroke is a disease of the brain. It is the third commonest cause of death after cancer and heart attack in the past middle age group people. Strokes can occur at any age, but essentially it is a disease of elderly people. The author calls for creating awareness of the problem in the forties with adequate treatment of hypertension and giving up of smoking.

STROKE OR CEREBRO-VASCULAR accident is a disease of the brain resulting from the abnormalities of blood vessels. (Blood vessels constitute arteries, veins and capillaries. Arteries carry the oxygenated blood from the heart to various organs of the body, and veins bring back the used blood from different organs to the heart and then to lung for oxygenation and removal of carbondioxide). According to world statistics, stroke is the third commonest cause of death in the past middle age group people. The other two causes are cancer and heart attack. Strokes can occur at any age, but essentially it is a disease of elderly people.

Of all the strokes in India, about one-fifth occur in the age groups under forty (which is called stroke in young). Exact incidence of mortality and morbidity due to stroke in India is not known, but a fair percentage is made disabled every year. Western statistics do indicate a reduction in the incidence of stroke in last two decades and this healthy trend is attributable to reduction of rheumatic heart disease and improved control of hypertension.

Brain gets almost 1/6th of the total blood, while it weighs only 1/60th of whole body weight. Brain utilizes maximum amount of glucose and oxygen for its proper functioning. Irreversible damage results if no oxygen or glucose is available to brain for three minutes. A person may become unconscious if there is interruption even for ten seconds. Brain receives this amount of blood via two carotid arteries in the front and one vertebro-basilar artery system in the

neck. One should appreciate that the vertebral arteries pass through the bone before entering the brain. These two systems have communications to help in the adjustment of blood volume to both the halves as well as various parts of the brain. Blood supply to the brain is so vital that nature has given autoregulating mechanism to adjust the blood distribution.

Why stroke?

Arteries (blood vessels) are the delivering pipes. Any disease process which may lead to occlusion or rupture of these pipes will result in a stroke. The disease process may either be in the lumen, in the wall or outside the wall to cause occlusion. Occlusion of the human wall lead to what is called Ischaemia and, therefore, ischaemic stroke. Rupture of the vessel will lead to haemorrhage and, therefore, haemorrhagic stroke. There are many factors which will influence and determine the extent of ischaemia and, haemorrhage. Understanding of these factors is of utmost importance and purpose of this discussion will be served if these are appreciated.

At the critical point of occlusion if the blood pressure is low, great degree of ischaemia will result. On the other hand if blood pressure is high, at the time of rupture, greater amount of bleeding will occur. This means a high degree of blood pressure is as bad for a haemorrhagic stroke as low blood pressure for an ischaemic stroke. This leaves no doubt on the need of a reasonable adequate blood pressure. There are, however, some factors which are not in our control.

Causes of stroke

As mentioned earlier, there are several causes of ischaemic strokes. Atherosclerosis is by far the commonest cause in elderly patients. Atherosclerosis is essentially an ageing process which lead to hardening of the arteries. Hardened arteries lose resilience and it leads to systolic hypertension. Hypertension, diabetes, hyperlipidaemia (Hypercholesterolaemia) aggravate atherosclerosis. A fair number of patients before developing the stroke have several transient ischaemic attacks (TIA) of local neurological deficit. The TIA lasts for a few minutes in majority of the cases but never lasts more than 24 hours. These are due to microemboli with arterial occlusion or haemodynamic with relative ischaemia or acute

hypertension. TIAs are warning signs before the occurrence of the stroke. This is the most important point to remember as something can be done at the stage of TIA, but nothing much can be done once a stroke has taken place. Another important risk factor which aggravates cerebral inchaemia is smoking and, therefore, it requires your consideration to stop smoking. For haemorrhagic stroke there are several causes but hypertension is the most important cause. Adequate control of hypertension has definitely reduced the incidence and severity of haemorrhagic stroke and benefited ischaemic strokes as well.

Diagnosis

Diagnosis of TIA and stroke is not difficult and mostly depends upon a good description by the patient or the relative. Symptoms (like paralysis, blindness, unconsciousness etc.) are of sudden onset and after a critical period there is always a history of improvement if the person survives. Haemorrhagic strokes are more common during exertion and activity while ischaemic strokes take place during sleep and inactivity. All body parts and functional activities are represented in the brain. From the impairment of body functions a doctor clinches the site of lesion in the brain. Medical technology has really improved the diagnostic capabilities in last 10-12 years. Computer assisted angiography, CT scan, Doppler blood flow and NMR have contributed a lot not only by providing non-invasive methods of diagnosis but also the specificity and accuracy. However, one should remember that these advanced technologies cannot replace the medical history. I strongly recommend you to observe the illness in as much detail as possible and pass on all the information to the doctor for correct diagnosis.

Stroke in young

As for the stroke in young, we in India are more concerned about the peripartum strokes i.e. stroke occurring in women either during pregnancy or soon after birth. By and large women belonging to poor socio-economic status are affected. Some study has been done, but the exact cause remains still elusive. This is the area where research activities should concentrate.

Treatment

As I have mentioned earlier, one should not remain unconcerned till the stroke occurs. Treatment should be instituted with the first occurrence of TIA. There is medical as well as surgical treatment available and your doctor should take the responsibility for advising you. Prevention and management of the risk factors are of utmost importance. Specialised medical attention is of great importance in the first 48-72 hours of occurrence of the stroke. One cannot do much for the dead brain tissue. However, all attention should be paid to revive the surrounding and partially damaged tissues. This would determine the degree of recovery as well as the rehabilitative potentials. The partially damaged tissue requires adequate glucose and oxygen. Some cases do require the management of vasospasm and increased intracranial hypertension. Once the critical period is over,

the only therapy then is physiotherapy. The role of physiotherapy and rehabilitation is to make the disabled person as much independent as possible in the activities of the daily living.

In conclusion, I would like to emphasize that there should be awareness of the problem in the forties. Hypertension should adequately be treated. Smoking should be stopped. TIAs should be recognised by the doctors as well as the patients and specialist consultation should be sought. Funding organizations should be alert and liberal to promote research in the areas relevant to us in India. □

(Based on public lectures series of All India Institute of Medical Sciences, New Delhi)

Computer literacy in schools

IN AN EFFORT to prepare for the launching of the pilot project for Computer Literacy and Studies in Schools (CLASS) in the country, a three-week training was imparted to 550 school teachers in 17 resource centres in different States recently.

Teachers attending the course were trained thoroughly on the structure of the system so as to enable them to detect simple faults and take corrective steps. The basic programme that they underwent included—(1) getting started, (2) programming in BASIC, (3) programming in logo, (4) ability to put the system together, (5) how the printer works, (6) BBC micro-architecture and general computer organisation, (7) ability to use spread sheet word processor, data base and graphic packages, (8) history of computing, and (9) experience with CAI packages to be used in schools.

CLASS is being introduced in 250 higher secondary schools dotted all over the country with a view to familiarising school children with micro-computers and to assess the effectiveness of micro-computers as a tool for the promotion of interactive and creative learning and teaching in the schools. Micros are different from traditional tools of learning and educational technology, since they offer an opportunity to the learners to give commands to the machine and to get responses in the form of numerical results, written texts, graphics and pictures in colour, besides answers in the form of sound. It is expected that a child learning to use the machine, will develop higher levels of intellectual ability and creativity to use all these modes in an integrated manner.

The project aims to introduce computer education at the senior secondary level which is expected to be extended to the middle and primary levels. Computer education could also be a part of the curriculum for every student irrespective of the area selected for specialisation, the project will ensure. □

OVER TWENTY THOUSAND villages were electrified in 1983-84. This is 14 per cent more than the set target of 17,716 villages for the year. Similarly, a total of 2,80,434 pumpsets were energised exceeding the target of 2,76,439, despite severe constraints and damage caused by cyclone and floods in some States. The achievement in pumpset energisation represents a rise of 21 per cent over the preceding year.

Thus, on an average, 55 villages were electrified and 768 pumpsets energised everyday during the year.

In the year 1969, when Rural Electrification Corporation was set up, only 13 per cent of the total villages and 9 per cent of the electric pumpset potential in the country were electrified and energised. By the end of March, 1984, the levels of village electrification and pumpset energisation rose to 60 per cent and 44 per cent respectively.

Hope for eye patients



A laser surgery in progress for restoring eye sight in the Moscow Research Institute of Eye Microsurgery



Professor S. N. Fyodorov examining Khwata Ahmed Abbas, a noted writer, film director and producer, for removal of a cataract from his eye



Correcting myopia by surgery

